DEPARTMENT OF THE ARMY PERMIT

Permittee: South Florida Water Management District

Permit Number: 199404532

Issuing Office: U.S. Army Engineer District, Jacksonville

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: Place fill for levees, canals, control structures, and pump stations for the following components of the Everglades Construction Project: Stormwater Treatment Area 1 West (as further described by Enclosure A); for Stormwater Treatment Area 2 (as further described by Enclosure B); the Hydropattern Restoration features of the discharge from Stormwater Treatment Area 2 (as further described by Enclosure C); for Stormwater Treatment Area 5 (as further described by Enclosure D); and the Hydropattern Restoration features for West Water Conservation Area 3A (as further described by Enclosure E); Rotenberger (as further described by Enclosure F), Cells 3 and 5 of Stormwater Treatment Area 6 (STA-6-Section 1, as further described by Enclosure G), and Cells 1, 2, and 4 of Stormwater Treatment Area 6 (STA-6-Section 2, as further described by Enclosure H).

The work described above is shown on the attached plans numbered 199404532 in 60 pages dated March 10, 1997.

Project Location: The Everglades, Broward, Hendry, and Palm Beach Counties, Florida.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on October 1, 2003. If you find that more time is needed to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what has been found. We will initiate the federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature and mailing address of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached, if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it

is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. Stormwater Treatment Area 2 (STA-2). Within four years after the first discharge from the hydropattern restoration features of STA-2 (East Levee L-6), the permittee shall make a best effort to have in operation any necessary additional water quality improvement measures to ensure that the water discharged across East Levee L-6 shall meet the numeric phosphorus criterion and other applicable water quality standards as adopted by rule by Florida Department of Environmental Protection (FDEP) as required by State and Federal law. Measures to be considered shall include those described in Specific Condition 7 below. The phosphorus criterion shall be 10 parts per billion (ppb) for Water Conservation Area 2A (WCA 2A) receiving waters in the event the FDEP does not adopt by rule, in accordance with 33 U.S.C.A. Section 1313(c) of the Clean Water Act, such criterion by December 31, 2003. For purposes of planning, 10 ppb shall be used as the design parameter pending adoption of the numeric criterion by the FDEP.

a. The "first discharge" is defined as the date of the first flow across the degraded East Levee L-6 into WCA 2A. Flows from the outfall Pumping Station G-335 shall not be considered as the first date if those flows are simply being routed through the L-6 Borrow Canal and back into the head of STA-2 for the purpose of recirculating flow during start-up.

b. It is recognized that the environmental effects described by the Programmatic Environmental Impact Statement (PEIS) need to be refined based on observed results and more up to date predictive tools. Therefore, the permittee shall, as described below, determine the effects of the hydropattern restoration features of STA-2 on downstream receiving waters in WCA 2A. To accomplish this, the permittee shall:

(1) By August 1, 1997, submit to this office, the U.S. Environmental Protection Agency (USEPA), and FDEP a plan and schedule to (a) utilize the phosphorus mass-balance model in the PEIS (the EPGM, Walker and Kadlec, 1996) or

develop one comparable in level of detail and (b) perform the field work necessary to support and calibrate such a model and establish baseline conditions in the downstream receiving waters. Field work shall include collection of water quality and soil phosphorus data, vegetation mapping for periphyton and macrophyte communities, and hydrologic data. The plan shall define monitoring at appropriate sites and time intervals to adequately define spatial and temporal variability. Upon review, and approval by this office, the plan shall be incorporated into this permit.

(2) By November 1, 1997, implement the field work.

(3) By January 1, 2000, submit to this office, the USEPA, and FDEP the recalibrated mass-balance model, and baseline water quality, soil phosphorus, vegetation and hydrologic data. Upon review, and approval by this office, the model shall be incorporated into this permit.

(4) Within two years plus 120 days of the date of first discharge from the hydropattern restoration features of STA-2, submit to this office, the USEPA, and FDEP an evaluation, based on the first two full years of data, of the effects of the discharges from the hydropattern restoration features of STA-2 on downstream receiving waters of WCA 2A. Concurrently, the permittee shall solicit comments on this evaluation through a publicly-noticed meeting which shall include representatives of this office, the USEPA, the FDEP, the Florida Game and Fresh Water Fish Commission (FGFWFC) and other interested parties.

(5) Within 90 days of the above-referenced meeting, this office shall evaluate environmental effects associated with the discharge of water through the hydropattern restoration features of STA-2. It is intended for this evaluation to be based on the best available information. Therefore, the evaluation shall consider but not be limited to: a comparison of the observed environmental effects with those described by the PEIS; a comparison of the observed environmental effects with the best

available understanding of what constitutes an imbalance in natural populations of aquatic flora or fauna in the Everglades Protection Area ecosystem; a comparison of the rate of change in appropriate parameters, such as soil phosphorus and water column phosphorus, between the two years of monitoring data obtained in accordance with this permit condition and the recalibrated phosphorus mass-balance model predictions; and a comparison of the rate of change in water quality, soil phosphorus, vegetation and hydrologic conditions between the baseline conditions and subsequent data obtained in accordance with this permit.

(a) Beneficial environmental effects to be evaluated shall include those changes in inundation of the areas immediately downstream of the hydropattern restoration features as well as those occurring throughout the Everglades Protection Area, such as, but not limited to: changes in depth; changes in duration; and, changes in timing.

(b) Adverse environmental effects to be evaluated shall include, but not be limited to: imbalances in natural populations of aquatic flora or fauna; the accumulation of phosphorus in the soil at rates and in amounts that facilitate the proliferation of cattails; increases in water column phosphorus concentrations at rates and in amounts which contribute to the elimination of desirable periphyton species; and inappropriate hydropatterns.

(6) If a determination is made that, notwithstanding compliance with applicable water quality requirements, adverse impacts exceed the environmental benefits and are contrary to this permit or law, then within 90 days the permittee shall submit plans and schedules to this office to remedy the adverse impacts. While the remedy is being developed and implemented, the permittee shall make best efforts to minimize the adverse impacts. Upon review, and approval by this office, the plan submitted to remedy the adverse impact shall be incorporated into the permit.

(a) The remedial plan shall include appropriate water quality improvement measures and shall be completed within four years after the date of first discharge from the hydropattern restoration features of STA-2.

(b) If the adverse impacts are determined to be attributable to excessive phosphorus loads, the permittee shall implement additional water quality improvement measures identified in Specific Condition 7 to ensure that water discharged by the hydropattern restoration features of STA-2 meets the numeric phosphorus criterion referred to in the first paragraph of this special condition. If the measures identified in Special Condition 7 will not be in place, then the permittee shall have a remedy in place by the end of the fourth year of operation. However, this interim remedy is in addition to any other remedies and shall not relieve the permittee of the obligation set forth in the first paragraph of this special condition.

2. Stormwater Treatment Area 5 (STA-5).

a. The permittee shall not discharge water into Rotenberger through the hydropattern restoration features of STA-5 (structures G405A-C) until after the permittee has placed in operation any necessary additional water quality improvement measures to ensure that the water discharged shall meet the numeric phosphorus criterion and other applicable water quality standards established for Rotenberger. Measures to be considered shall include those described in Specific Condition 7, below.

b. Notwithstanding paragraph (a) of this Special Condition, the permittee may operate the hydropattern restoration features for STA-5 if all of the following conditions are met. The purpose of the following conditions are to establish the process to achieve "initial hydropattern restoration" through a series of phased steps in an adaptive management approach. The term "initial hydropattern restoration" is defined as achieving a 0-1 foot (dry season-wet season) schedule, as

agreed upon in the 1983 "Memo of Agreement between the Florida Department of Environmental Regulation, the Board of Trustees of the Internal Improvement Trust Fund, the South Florida Water Management District, and the Florida Game and Fresh Water Fish Commission concerning the Holey Land and Rotenberger Project."

(1) By August 1, 1997, submit to this office, Florida Game and Fresh Water Fish Commission (FGFWFC), the U.S. Environmental Protection Agency (USEPA), and the Florida Department of Environmental Protection (FDEP) a plan and schedule to (a) utilize the phosphorus mass-balance model in the Programmatic Environmental Impact Statement (PEIS) (the EPGM, Walker and Kadlec, 1996) or develop one comparable in level of detail and (b) develop a phased program of initial hydropattern restoration and (c) perform the field work necessary to support such a model and program and establish background conditions in the downstream receiving waters. The phased program shall be based on an analysis of topographic information to identify areas of vegetation that could benefit from changes in hydropattern. Field work shall include collection of water quality and soil phosphorus data, vegetation mapping for periphyton and macrophyte communities, and hydrologic data. The plan shall define monitoring at appropriate sites and time intervals to adequately define spatial and temporal variability. Upon review, and approval by this office, the plan and program shall be incorporated into this permit;

(2) By November 1, 1997, implement the field work.

(3) By January 1, 1999, submit to this office, FGFWFC, the USEPA, and FDEP the recalibrated mass-balance model, phased hydropattern program, and baseline water quality, soil phosphorus, vegetation and hydrologic data. Upon review, and approval by this office, the model shall be incorporated into the permit.

(4) Following approval by this office of the submittal of paragraph (3), operate the control structures along the border of Rotenberger to retain or release rainwater

for one year to achieve initial hydropattern restoration as nearly as possible through the control of rainwater.

(5) After one year of such operation, the permittee shall, in consultation with the Jacksonville District, the USEPA, FDEP, and FGFWFC, evaluate the impacts of this first phase of initial hydropattern restoration on the vegetation of the Rotenberger. The evaluation will include a recommendation whether water from STA-5 may be introduced, and, if so, the amount and timing that would be acceptable for an initial addition of water from that STA. Concurrently, the permittee shall solicit a comments on this evaluation through a publicly-noticed meeting which shall include this office, the USEPA, the FDEP, the FGFWFC and other interested parties.

(6) No addition of water from STA-5 is authorized until there is an agreement for such discharge between the FGFWFC, FDEP, SFWMD, and the United States, which in particular includes this office and USEPA.

(7) When an agreement is reached to introduce water through the hydropattern restoration features of STA-5, the permittee shall determine the effects on Rotenberger as follows.

(a) Within two years plus 120 days of the date of first discharge, submit to this office, FGFWFC, the USEPA, and FDEP an evaluation, based on the first two full years of data, of the effects of the hydropattern restoration on Rotenberger. The "first discharge" is defined as the date of the first flow from the STA-5 hydropattern restoration works into Rotenberger.

(b) Within 90 days of the above-referenced meeting, this office shall determine evaluate environmental effects associated with the discharge of water. It is intended for this evaluation to be based on the best available information. Therefore, the evaluation shall consider but not limited to: a comparison of the observed environmental effects with

those described by the PEIS; a comparison of the observed environmental effects with the best available understanding of what constitutes an imbalance in natural populations of aquatic flora or fauna in the Everglades ecosystem; a comparison of the rate of change in appropriate parameters, such as soil phosphorus and water column phosphorus, between the two years of monitoring data obtained in accordance with this permit condition and the recalibrated phosphorus mass-balance model predictions; and a comparison of the rate of change in water quality, soil phosphorus, vegetation and hydrologic conditions between baseline and subsequent data obtained in accordance with this permit.

(i) Beneficial environmental effects to be evaluated shall include those changes in inundation of the areas immediately downstream of the discharges as well as those occurring throughout Rotenberger, such as, but not limited to: changes in depth; changes in duration; and, changes in timing.

(ii) Adverse environmental effects to be evaluated shall include, but not be limited to: imbalances in natural populations of aquatic flora or fauna; the accumulation of phosphorus in the soil at rates and in amounts that facilitate the proliferation of cattails; increases in water column phosphorus concentrations at rates and in amounts which contribute to the elimination of desirable periphyton species; and inappropriate hydropatterns.

(c) If a determination is made that, notwithstanding compliance with applicable water quality requirements, adverse impacts exceed the environmental benefits and are contrary to this permit or law, then within 90 days the permittee shall submit plans and schedules to this office to remedy the adverse impacts. While the remedy is being

developed and implemented, the permittee shall make best efforts to minimize the adverse impacts. Upon review and approval by this office, the plan shall be incorporated into the permit. The remedy shall include appropriate water quality improvement measures, including, but not limited to, appropriate modification of the phased hydropattern program or the additional water quality improvement measures identified in Special Condition 7. The remedy shall be completed within four years after the date of first discharge from the hydropattern restoration features of STA-5.

c. Releases from STA-5 into Rotenberger may be made despite the above constraints if FGFWFC requests water on an emergency basis such as to extinguish muck fires.

3. West Water Conservation Area-3A (West WCA-3A). The hydropattern restoration feature for West WCA-3A shall not be placed into operation until water quality improvement measures are implemented to achieve the numeric phosphorus criterion and other applicable water quality standards as adopted by rule by the Florida Department of Environmental Protection (FDEP) as required by law. Measures to be considered shall include those described in Specific Condition 7, below. The numeric phosphorus criterion shall be 10 parts per billion (ppb) for WCA 3A receiving waters in the event the FDEP does not adopt by rule, in accordance with 33 U.S.C.A. Section 1313(c) of the Clean Water Act, such criterion by December 31, 2003. For purposes of planning, 10 ppb shall be used as the design parameter pending adoption of the numeric criterion by the FDEP. For West WCA-3A, "operation" is defined as flow of water across degraded L-4 South Levee and does not prevent the use of the L-4 Borrow Canal to bypass flows east or west.

4. Stormwater Treatment Area 3/4 and the hydropattern restoration features for East WCA-3A (STA-3/4). These works (described by Enclosure I) are not authorized for construction by this permit instrument. This condition is not a denial of authorization but simply recognizes that the permittee intends to modify the plans based on other ongoing planning activities.

5. In order to ensure the permittee meets the December 31, 2006, deadline for compliance with final water quality standards, the permittee shall submit to this office, not later than January 1, 2001, the strategy they will utilize to ensure the additional water quality improvement measures, including, but not limited to, additions and enhancements to STA-1W, STA-2, STA-3/4, STA-5, STA-6-Section 1, and STA-6-Section 2, so that the water discharged from these facilities shall meet the numeric phosphorus criterion and other applicable water quality standards as adopted by rule by the Florida Department of Environmental Protection (FDEP) as required by law. The strategy shall be based on achieving a numeric phosphorus criterion of 10 ppb for each receiving water in the event the FDEP does not adopt by rule, in accordance with 33 U.S.C.A. Section 1313(c) of the Clean Water Act, such criterion by December 31, 2003. For purposes of planning, 10 ppb shall be used as the design parameter pending adoption of the numeric criterion by the FDEP. The submittal shall also describe alternative measures considered, including those in Special Condition 7, the rationale for selection of the recommended alternatives, a schedule for implementation of the strategy, implementation of the operational plans, considerations of flexibility to adjust to potential ranges of phosphorus criteria, and revisions/updates to predictive models such as those in the Programmatic Environmental Impact Statement for cattail response, periphyton response and hydropattern changes (such as updated topographic information). A preliminary draft of this strategy shall be submitted to this office by January 1, 1999, and a revised draft strategy shall be submitted to this office by January 1, 2000.

6. Northern L-8 Basin Improvements (described by Enclosure J) are not authorized for construction by this permit instrument. This condition is not a denial of authorization but simply recognizes that the permittee intends to modify the plans based on other on-going planning activities.

7. The permittee, in coordination with the Florida Department of Environmental Protection (DEP) and other interested parties, shall investigate and develop water quality improvement measures, including Supplemental Technologies, Best Management Practices (BMPs) and STA operational plans, which when combined meet the numeric phosphorus criterion and other applicable water quality standards as adopted by rule by the FDEP as required by Federal

and State law, and the restoration goals as outlined by Federal and State law. The phosphorus criterion shall be 10 parts per billion (ppb) in the event the FDEP does not adopt by rule, in accordance with 33 U.S.C.A. Section 1313(c) of the Clean Water Act, such criterion by December 31, 2003. For purposes of planning, 10 ppb shall be used as the design parameter pending adoption of the numeric criterion by the FDEP.

a. The permittee, in coordination with the FDEP and other interested parties, shall investigate treatment technologies that may supplement the STAs for achieving the numeric phosphorus criterion referred to in the first paragraph of this special condition. The investigations shall follow a sequence of studies, bench tests and pilot demonstrations sufficient to incorporate results into the plans described in special condition number 5. Technologies to be investigated, shall include but are not necessarily limited to:

(1) Wetlands
(2) Managed Wetlands
(3) Low-Intensity Chemical Dosing of STAs
(4) Submerged Vegetation/Limerock
(5) Chemical Treatment/Direct Filtration
(6) Chemical Treatment/High-Rate Sedimentation
(7) Chemical Treatment/Dissolved -Air Floatation
(8) Microfiltration
(9) Periphyton STAs

b. The permittee shall investigate techniques for optimizing the design and operation of the STAs, as required by law. These investigations will be designed to evaluate and optimize phosphorus uptake and retention within the range of water depths, hydraulic loading rates, and hydraulic retention times for the STAs. These investigations will include information from the monitoring of the STAs as they are placed into operation.

c. The permittee, along with other entities, shall investigate measures that would enhance the performance of BMPs as required by law.

d. The permittee shall develop an operational plan for each STA six (6) months prior to the first discharge from each specific STA, except STA-6, Section 1 which shall have an operational plan developed three (3) months prior to the first discharge. The plan will define how each STA will be operated under the expected range of hydrologic conditions. The plan will also describe the timing, volume and distribution of flows within the STAs and in downstream receiving waters, and the resulting incremental changes in flows at other structures in the Central and Southern Florida Project. The plans will propose implementation years, levels of treatment provided, and estimated phosphorus loads discharged for incremental increase of (1) average annual increase of 28% additional flows compared to the 1979-1988 period; and (2) BMP makeup water. The plan shall also include revisions/updates to predictive models such as those in the Programmatic Environmental Impact Statement (PEIS) for cattail response, periphyton response and hydropattern changes (such as updated topographic information). The operational plans for the STAs shall be consistent with and coordinated with: the Lower East Coast Water Supply Plan; Lake Okeechobee Regulation Schedule; schedules for the WCAs; the Central and Southern Florida Project Comprehensive Review Study; and, the entitlement of the Seminole Tribe of Florida to surface waters withdrawals under the Water Rights Compact (P.L. 100-228).

e. The works authorized by this permit, alone or in combination with other works, shall not be caused to be operated at any time (including any incremental increase of flows toward the 28% increase provided by law) in a manner that would result in the total load of phosphorus exceeding the limits in paragraph 8.A. (80% to the EPA and 85% to the Refuge) of the Settlement Agreement between the United States of America and the South Florida Water Management District et al., Case Number 88-1886-CIV-HOEVELER (Southern District of Florida), as it may be amended.

f. On January 1, 1998, and annually thereafter until project completion, the permittee shall submit to this office a status report, such as the annual legislative report, on the various activities of this permit.

8. The permittee shall submit to this office restoration evaluation plans for each STA. The plans shall be consistent with the Florida Department of Environmental Protection (FDEP) permits to be issued pursuant to law, including, but not limited to, their rules for issuance of an operating permit and under their rules implementing Section 402 of the Clean Water Act (National Pollution Discharge Elimination System (NPDES) permit). The plans shall be submitted to this office 6 months prior to the first discharge from each STA to allow time for review and coordination with FDEP and other interested parties, approval by this office, and incorporation into this permit. The plans shall consist of the following components:

a. Hydropattern Restoration. For those STAs with an associated hydropattern restoration component, the plans submitted shall consider the principles in the document "Evaluation of Benefits and Impacts of the Hydropattern Restoration Components of the Everglades Construction Project" (South Florida Water Management District, September 13, 1996). The plan shall include, but not be limited to, sampling for water quality, sediment, hydrological and ecological effects. A baseline for these parameters shall be established prior to discharge. Additional details are also found in the Special Conditions for STA-2 (Special Condition 1) and for STA-5 (Special Condition 2).

b. Mercury. The permittee shall submit a restoration evaluation plan to determine if the construction or operation of the STAs causes adverse accumulation of mercury in the biota, including wading birds. To accomplish this, the permittee shall:

(1) By August 1, 1997, submit to this office, U.S. Environmental Protection Agency (USEPA), U.S. Fish and Wildlife Service (USFWS), National Park Service (NPS), Florida Game and Fresh Water Fish Commission (FGFWFC), and FDEP a plan and schedule to implement a mercury monitoring program that meets the information needs of the evaluations described below. Prior to submission, the permittee shall solicit comments on the draft plan through a publicly-noticed meeting which shall include representatives of this office, USEPA, USFWS, NPS,

FGFWFC, FDEP, and other interested parties. Upon review and acceptance the plan shall be incorporated into this permit.

(2) By November 1, 1997, initiate the field work necessary to establish baseline conditions: (a) within the STAs; (b) in areas receiving discharges from the STAs; (c) and in areas of the Everglades Protection Area already impacted by Everglades Agricultural Area (EAA) discharges.

(3) Within 90 days after first discharge from each STA, submit to this office, the USEPA, USFWS, NPS, FGFWFC, and FDEP the report evaluating the baseline conditions described in paragraph (2), above.

(4) Within two years plus 120 days of the date of first discharge from each STA, submit to this office, the USEPA, USFWS, NPS, FGFWFC, and FDEP an evaluation, based on the first two full years of data, of the effects of construction and operation of the STAs and downstream water quality improvements on mercury species storage, release and bioaccumulation. At a minimum, the evaluation shall include information to determine: (1) release of mercury into the water column of the STAs upon initial flooding, (2) the rate of removal of mercury from EAA discharges to the STAs prior to discharge to downstream waters, (3) the rate of accumulation of mercury in sediments of the STAs, and (4) net change in bioaccumulation of mercury in fish and wading birds within the STAs, in areas receiving discharges from the STAs, and in areas of the Everglades Protection Area already impacted by EAA discharges. Prior to submission, the permittee shall solicit comments on this evaluation through a publicly-noticed meeting which shall include representatives of this office, USEPA, USFWS, NPS, FGFWFC, FDEP, and other interested parties.

(5) Within 90 days of submission, the permittee, this office, the USEPA, USFWS, NPS, FGFWFC, FDEP, and other interested parties shall determine if adverse effects on mercury species storage, release or bioaccumulation

associated with the construction and operations of the STAs are occurring. Based on the determination, this office shall decide if a remedial plan is required.

(6) Within 90 days of a decision by this office that remediation is required, the permittee shall submit plans and schedules for remediation of the adverse effects to this office, USEPA, USFWS, NPS, FGFWFC, and FDEP, for review and comment. After consultation with the above agencies, the Jacksonville District may approve appropriate remediation measures which shall be completed within four years after the date of first discharge from the STAs.

c. Water Quality. The restoration evaluation plan for each STA will be consistent with that required by the FDEP permits issued pursuant to Federal and State law. Copies of the water quality monitoring reports submitted to the FDEP shall also be submitted to this office. In the event FDEP does not require an National Pollution Discharge Elimination System (NPDES) permit or if the operating permit for the STAs does not require the following items, the permittee shall submit a water quality restoration evaluation plan to this office for review, approval, and subsequent incorporation into this permit prior to first discharge. The items to be included in the plan are: (1) the rate and efficiency of phosphorus removal by the STAs; and, (2) the analysis which demonstrates assurance that no long-term imbalance in natural populations of aquatic flora and fauna will result.

d. Restoration evaluation plan reports for each STA shall be submitted January 1, 1998, and annually thereafter, including data analysis for the previous water year (October-September).

9. The permittee shall implement the actions related to fish and wildlife resources found in Enclosure K except those recommendations relating to mercury monitoring which is to be considered in the preparation of the plan required by Specific Condition 8b. The word "should" in those recommendations as they apply to the permittee will be read as "shall." Enclosure L is hereby incorporated as a Special Condition to this permit.

10. No on-site construction work related to STA-6, Section 2 is authorized by this permit until the following is performed: First, the permittee shall submit to this office a plan to survey Archeological Sites 8HN47, 8HN48 and 8HN49 in a manner sufficient to determine the horizontal boundaries of the sites in accordance with Appendix C, 33 CFR 325, the Corps regulations implementing the National Historic Preservation Act. Second, upon approval, the permittee shall then conduct the survey. Third, the permittee will then submit to the Jacksonville District a map overlaying the archeological site boundaries on the construction plans of the proposed levee and canals. Fourth, if there is an overlap, the permittee shall submit a plan of mitigation, or a construction redesign to avoid the sites. Fifth, the Corps will review the mitigation plan or modified construction plans and, if appropriate, modify this permit.

11. The permittee shall complete the assessments to locate areas containing soil and groundwater contaminants, particularly pesticides and metals, prior to the start of construction for any individual STA. The permittee shall remove these contaminants prior to the start of or, if not in the construction footprint, prior to the flooding of, the STA. Prior to the flooding of any individual STA, the permittee shall submit a report to this office describing the locations and nature of the contaminants and actions completed for removal.

12. The permittee shall acquire and, as appropriate, restore and manage lands necessary to provide mitigation for impacts to federally regulated wetlands due to construction authorized by this permit. By January 1, 1998, the permittee shall submit to this office an initial report describing sites potentially available to satisfy the mitigation requirements of this Special Condition. All acquisition shall be subject to this office's approval and shall be completed by October 1, 2003. The permittee shall subsequently submit to this office for review annual reports updating the progress of lands being proposed for acquisition and status of implementation of management. The permittee shall consider the following criteria in selecting land for acquisition before purchase.

a. Whether the lands are adjacent to current public preserves, natural sites or regional ecologically significant sites such as national or state parks; and,

b. Whether the lands contain a mixture of native vegetative community types; and,

c. Potential for management of the site to enhance and maintain the site for wetland dependent species, deer, migratory birds and for public recreation.

Preference shall be given to land parcels of 5,000 contiguous acres. The total acreage of mitigation lands required under this special condition shall be approximately 9,320 based on a 2:1 acreage ratio for impacts by STA-2, works within Rotenberger, works within WCA-1, and other works. This figure will be adjusted as this permit is modified to incorporate project revisions.

13. None of the authorizations or conditions in this permit are intended to diminish or alter the governmental authority and powers of the Miccosukee Tribe of Indians and the Seminole Tribe of Florida ("Tribes"), or diminish or alter the rights of those tribes, including rights under any tribal agreement with the permittee or any agency of the U.S. Government. The permittee shall advise this office and the Tribes when the permittee becomes aware of issues implicating the powers or rights of the Tribes or other issues that may make necessary a modification to the permit. In addition, the Miccosukee Tribe of Indians is currently in the process of establishing water quality standards as provided by the Clean Water Act and that, when adopted, would require an evaluation of the effect on this permit resulting from the application of these standards to waters discharged onto or through Miccosukee Tribal lands. The water quality certification from the Seminole Tribe of Florida is, as provided by General Condition 5, found as Enclosure L, and its conditions are hereby incorporated as special conditions to this permit. In any case, none of the authorizations in this permit are intended to conflict with nor relieve the permittee of compliance with applicable water quality standards of either the Miccosukee Tribe of Indians or the Seminole Tribe of Florida.

14. The permittee shall submit to this office any revisions and/or modifications to the underlying design documents and drawings for the enclosed project plans

15. The permittee is advised that failure to provide complete requests for permit modifications or complete monitoring reports as required by any of the conditions above, may prevent this office from issuing future modifications to this permit and authorizations for further construction, even if the particular incomplete submittal is for a different portion of the project.

16. Nothing in this permit shall be construed so as to supersede or conflict with applicable Federal and State law or the Settlement Agreement between the United States of America and the South Florida Water Management District et al., Case Number 88-1886-CIV-HOEVELER (Southern District of Florida), as it may be amended.

17. The permittee shall submit to this office for review and approval a recreational plan for selected STAs,. The plan will also discuss those recreational activities considered but then restricted due to their potential impacts on the treatment functions of the STA's.

18. This permit shall be modified to eliminate duplicative, conflicting or unnecessary terms and conditions herein to conform with the Florida Department of Environmental Protection or U.S. Environmental Protection Agency issued permits for the Everglades Construction Project if the permit modifications meet the requirements of applicable State and Federal law, including, but not limited to, the Everglades Forever Act and Section 402 of the Clean Water Act.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

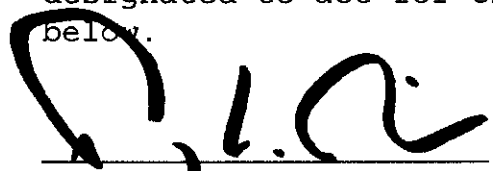
Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

(PERMITTEE) (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.



13 MAR 97

(DISTRICT ENGINEER) (DATE)
Terry L. Rice
Colonel, U.S. Army

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE-SIGNATURE) (DATE)

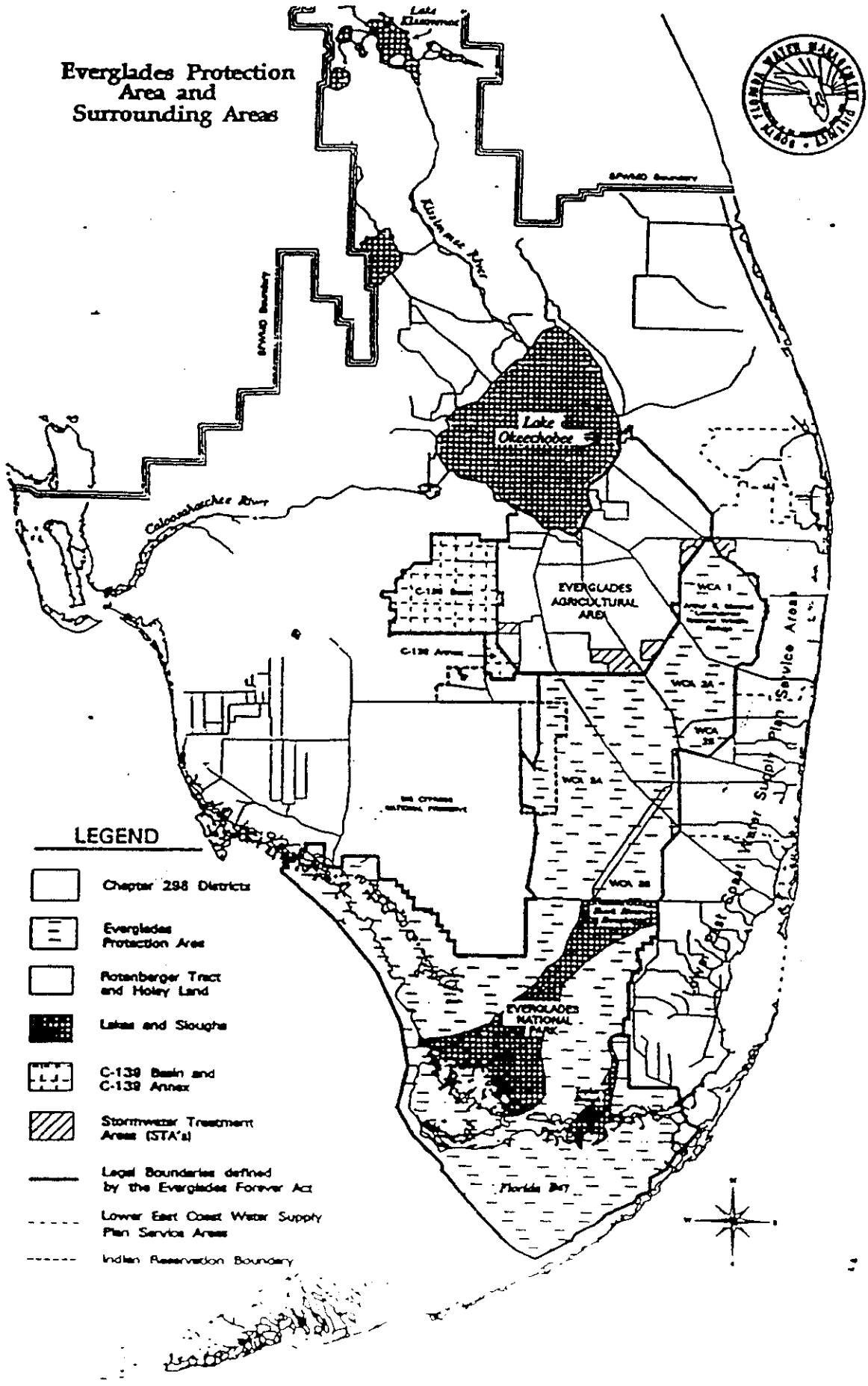
(NAME-PRINTED)

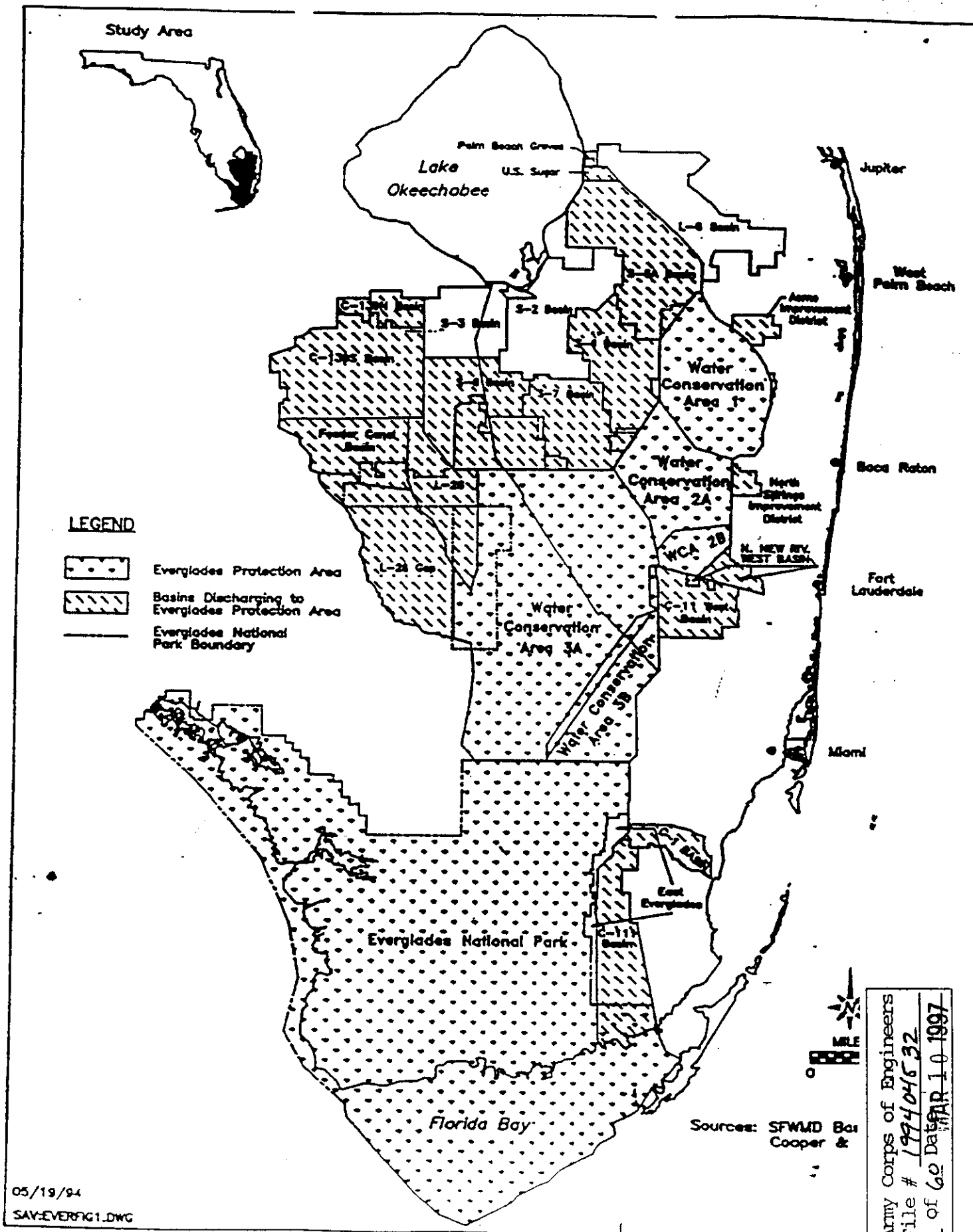
(ADDRESS)

(CITY, STATE, AND ZIP CODE)

List of Enclosures

Pages	Description
2 - 4	Project Site Map
5 - 9	Enclosure A. Stormwater Treatment Area 1 West
10 - 17	Enclosure B. Stormwater Treatment Area 2, including S-5A Basin Runoff Diversion
18 - 20	Enclosure C. Hydroperiod Restoration for Water Conservation Area 2A
21 - 26	Enclosure D. Stormwater Treatment Area 5.
27 - 30	Enclosure E. Hydropattern Restoration for Water Conservation Area 3A West
31 - 32	Enclosure F. Rotenberger Restoration.
33 - 40	Enclosure G. Stormwater Treatment Area 6, Section 1
41 - 46	Enclosure H. Stormwater Treatment Area 6, Section 2
47 - 51	Enclosure I. Stormwater Treatment Area 3/4, including Hydropattern Restoration for Water Conservation Area 3A East.
52 - 53	Enclosure J. Northern L-8 Basin Improvements.
54 - 57	Enclosure K. Fish and Wildlife Measures.
58 - 60	Enclosure L. Seminole Tribe of Florida 401 Water Quality Certification.





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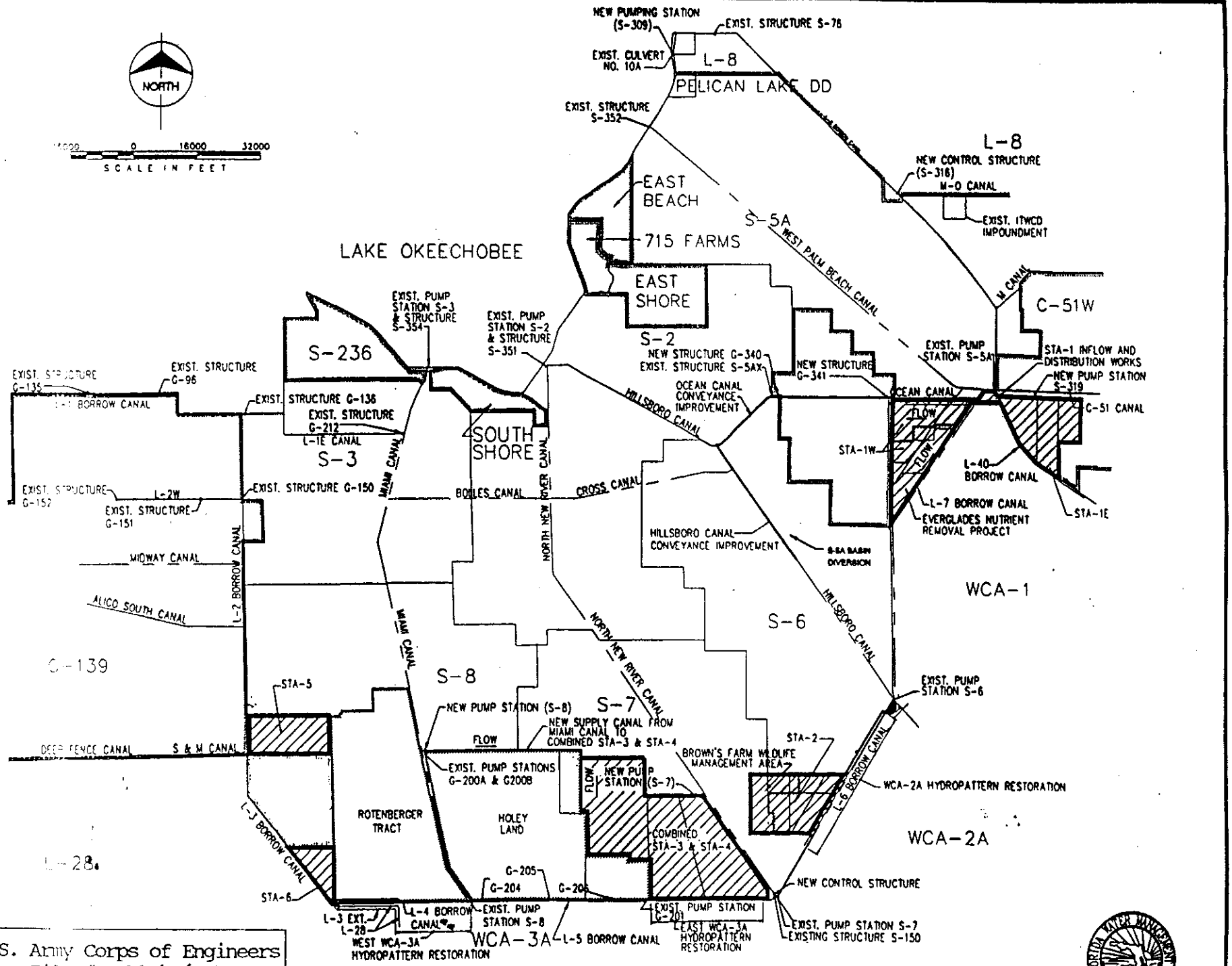


VERVIEW OF EVERGLADES RESTORATION PROJECT

NOT TO SCALE

Enclosure A

Stormwater Treatment Area 1 West

This project will: add canals and structures at the north end of Water Conservation Area 1 to distribute inflows to the east and west; add inflow canal, levees, control structures, perimeter levees, seepage canals, and collection canals to flood certain agricultural lands to create treatment cell 5 adjacent to the existing Everglades Nutrient Removal works (ENR); degrade levees internal to the ENR that currently separate Cell 2 from Cell 4 and Cell 1 from Cell 3; add to and modify the existing ENR canals and structures to discharge treated water into borrow canal L-7 on the perimeter of Water Conservation Area 1. The project will provide an effective treatment area of approximately 6,670 acres. The works are described by the drawings on pages 7 to 9.

Specific construction activities include the following.

Inflow and Distribution Works. Excavation of borrow canal and construction of adjacent Separation Levee at the north end of Water Conservation Area 1 parallel to and south of the existing FP&L line. Addition of control structure G-300 in the L-40 Borrow Canal, G-301 in the L-7 Borrow Canal and G-302 across Levee L-7 to direct water from Pump Station S-5A to Stormwater Treatment Area 1 West.

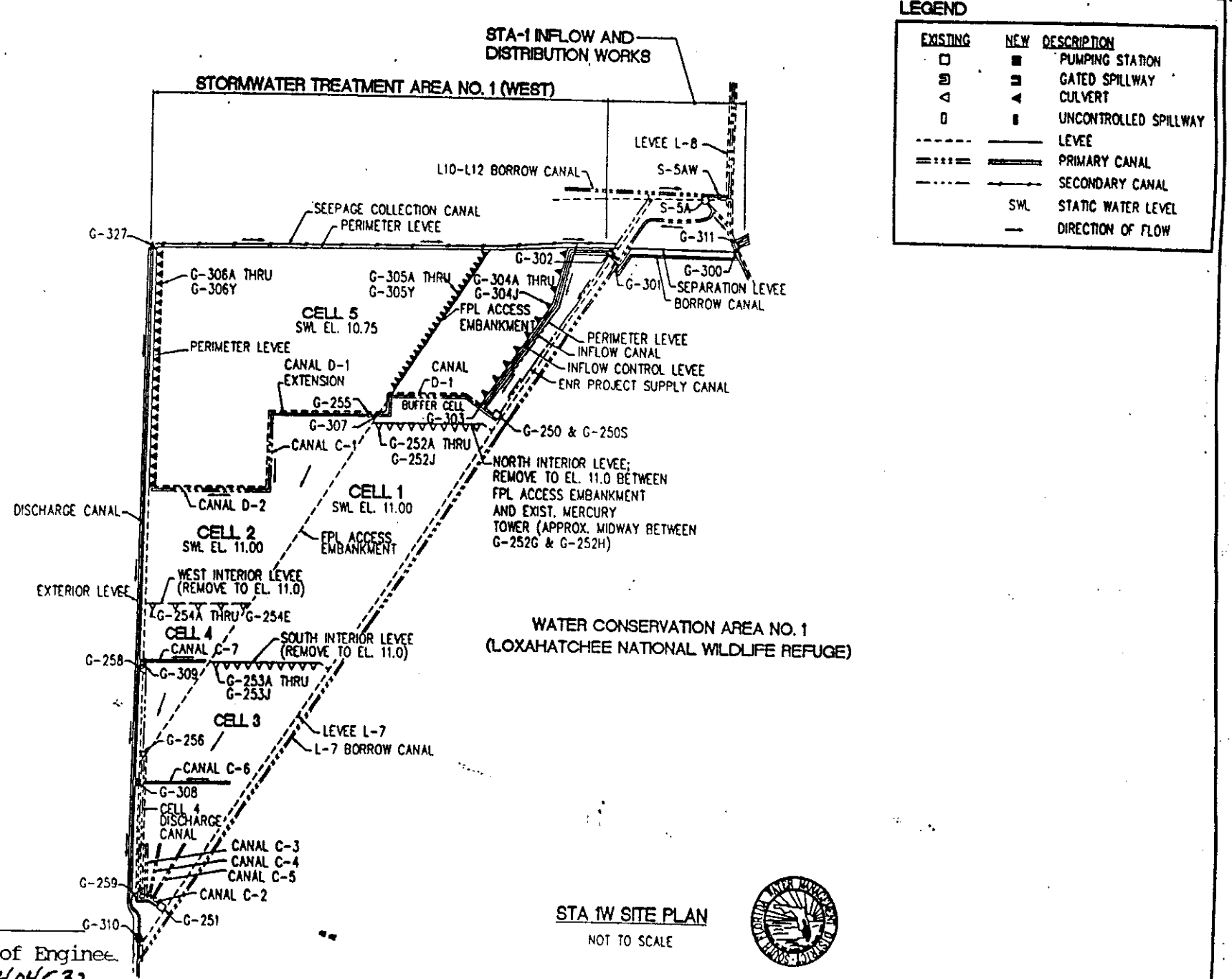
Inflow Works. Excavation of inflow canal starting from Structure G-301 at Levee L-7 and ending at a new Pump Station G-303 on the Canal D-1. Parallel to the inflow canal, construction of a perimeter levee, inflow control levee and seepage collection canal. Construction of Culverts G-304A-J through the inflow control levee and excavation of a spreader canal to divert and distribute flow from the inflow canal to Cell 5.

Cell 5. Excavation of collection and spreader canals on either side of the FPL Embankment and construction of culverts G-305A-Y. Excavation of collection canal and construction of perimeter levee at the west perimeter, with control structures G-306A-Y to pass water from Cell 5 into the Discharge Canal. "Degrade" existing agricultural canals and berms within Cell 5. Construct perimeter levee and seepage control canal along the north perimeter of Cell 5.

Discharge Canal. Excavate discharge canal and construct perimeter levee, seepage control canal, and exterior levee from the northwest corner of Cell 5 south to Borrow Canal L-7. Enlarge Canal C-7 and construct control structure G-309 through

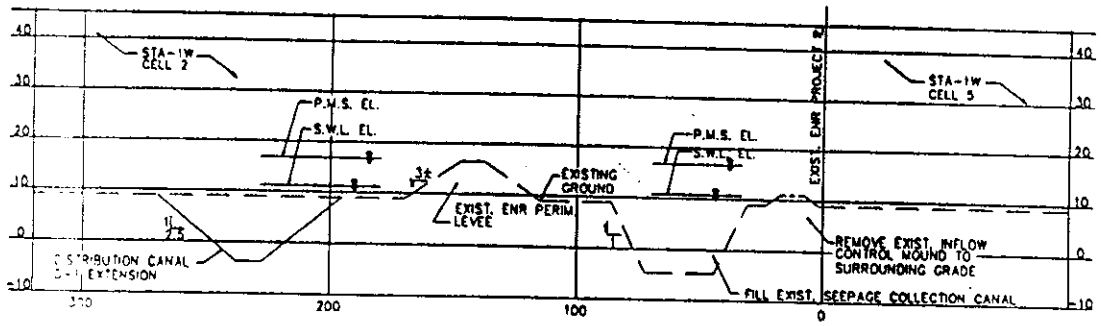
the perimeter levee to serve as a collection canal for Cell 2/4. Enlarge Canal C-6, remove the existing inflow control mound (parallel to the L-4 discharge canal) that blocks Canal C-6, and construct control structure G-308 through the perimeter levee all to serve as a collection canal for Cell 1/3. Construct Pump Station G-310 at Levee L-7 and extension of the discharge canal to Borrow Canal L-7.

Modifications to ENR. Construction of control structure G-307 at the end of existing Canal D-1 at the FPL Embankment and excavation to extend Canal D-1 to Canal C-1. Degrade the interior levee between the buffer cell and Cell 1, the levee between Cell 1 and Cell 3, and the levee between Cell 2 and Cell 4. Modification of Pump Station G-250 to remove the inflow pumps but maintain the seepage pumps for seepage control and recirculation.

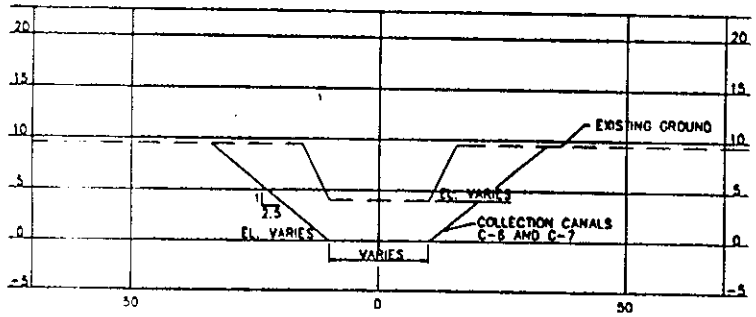


STA 1W SITE PLAN

NOT TO SCALE



TYPICAL SECTION - DISTRIBUTION CANAL D-1 EXTENSION
NOT TO SCALE



TYPICAL SECTION - COLLECTION CANALS
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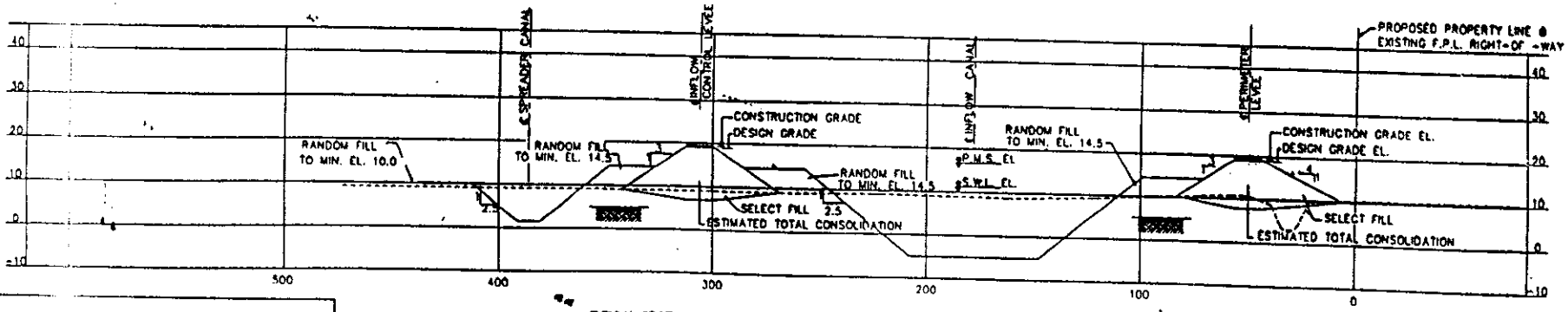
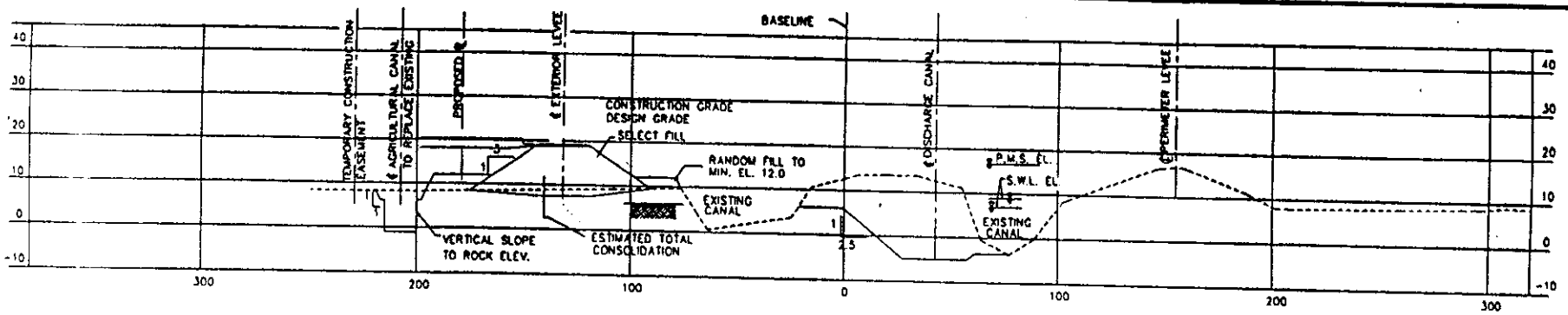
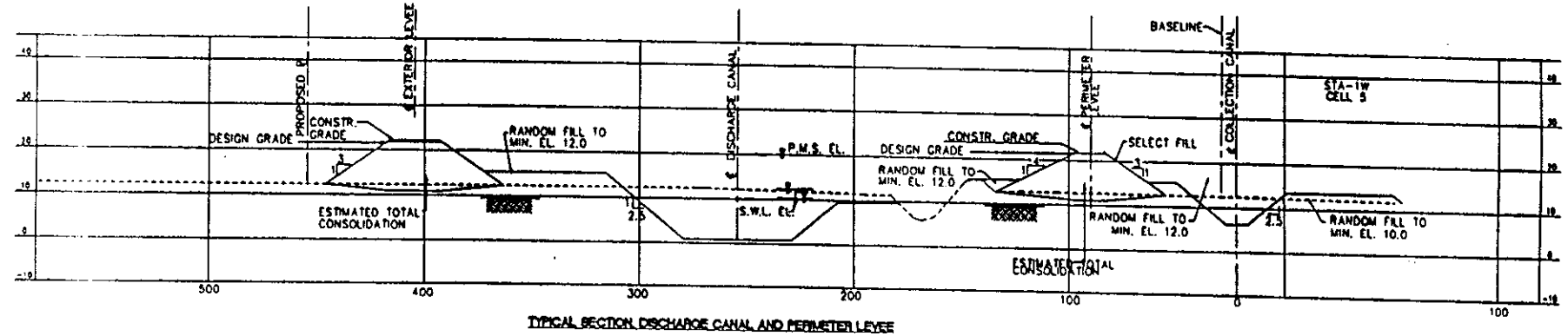


TYPICAL SECTION - INFLOW CANAL

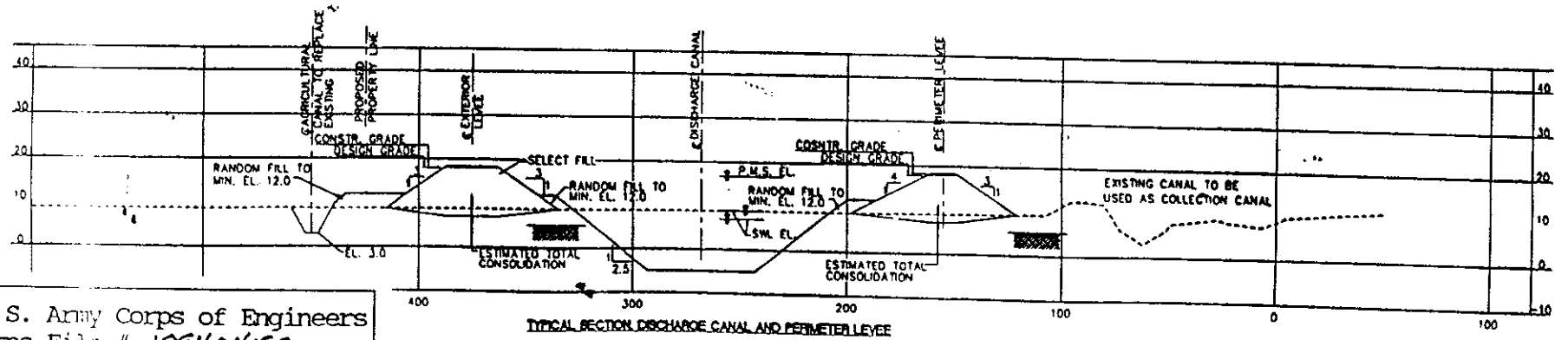
TYPICAL CROSS SECTIONS STA 1W
NOT TO SCALE



TYPICAL SECTION DISCHARGE CANAL



TYPICAL SECTION DISCHARGE CANAL AND PERIMETER LEVEE



TYPICAL SECTION DISCHARGE CANAL AND PERIMETER LEVEE

TYPICAL CROSS SECTIONS STA 1W

NOT TO SCALE

Enclosure B

Stormwater Treatment Area 2
including
S-5A Basin Runoff Diversion

This project will: add structures to the Ocean Canal and improve portions of the Ocean and Hillsboro canals to divert a portion of the runoff in Basin 5A to the Hillsboro Canal; add structures and canals to divert water from the Hillsboro Canal at Pumping Station S-6; flood Brown's Farm Wildlife Management Area and certain adjacent agricultural lands to create three treatment cells; add a Pump Station to discharge the treated flows to the L-8 borrow canal. The project will provide an effective treatment area of approximately 6,430 acres. The works are described by the drawings on pages 12 to 17.

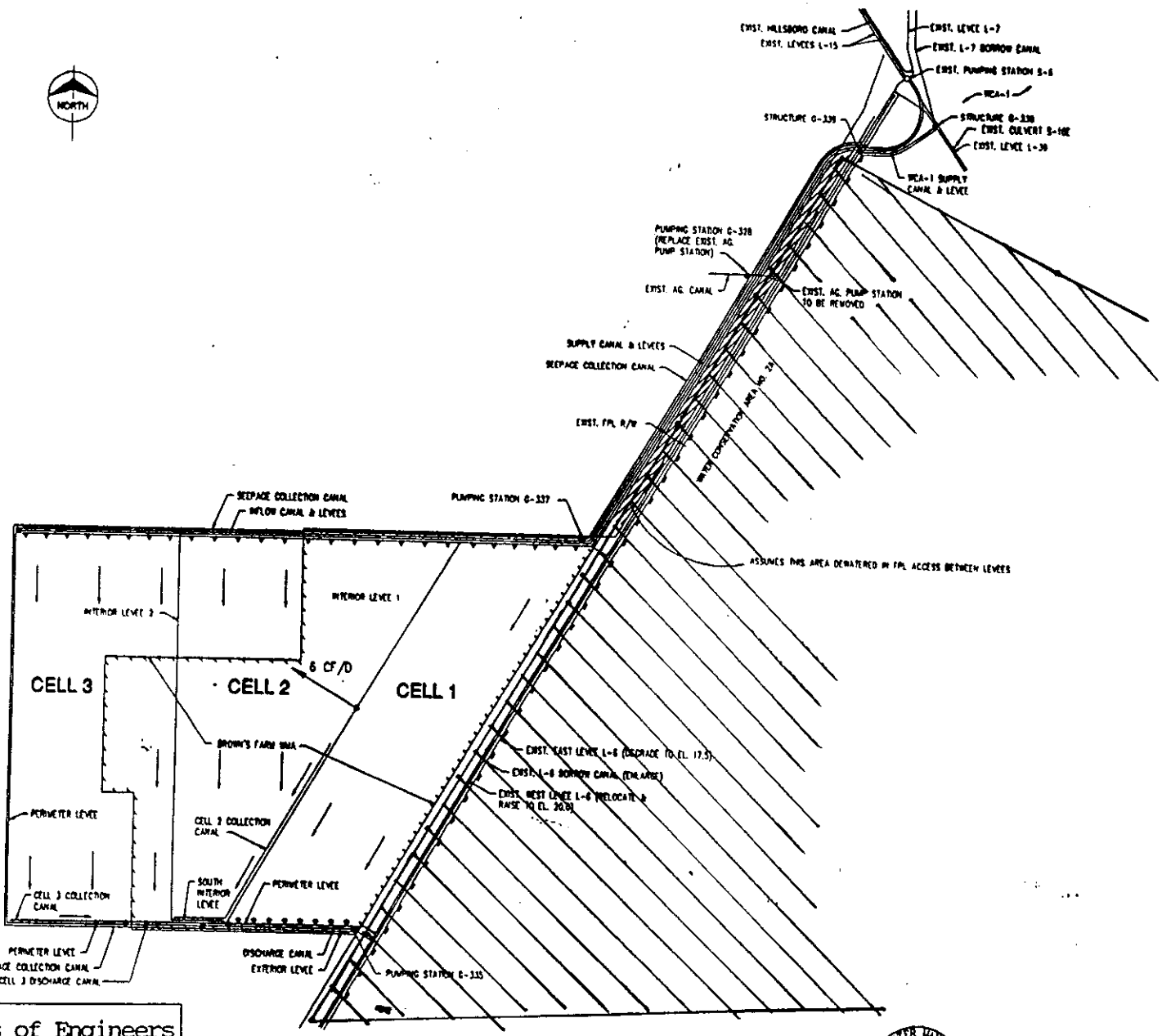
Specific construction activities include the following.

S-6 Diversion and Supply. Excavation of a Diversion Canal and construction of a levee from the discharge of Pumping Station S-6 through Water Conservation Area 2A to Borrow Canal L-6, then the continuation of that excavation through agricultural land south (and the construction of levees on both sides of the canal) to serve as the Supply Canal. At Borrow Canal L-6, construction of a plug to the north and a control structure G-339 to the south of the Diversion Canal to direct flows to the Supply Canal or to the Hydropattern Restoration. Excavation of a canal and levee from Borrow Canal L-6 across Water Conservation Area 2A to connect to the Hillsboro canal to supply water from the Hydropattern Restoration to Water Conservation Area 1A. Construction of pump station G328 to replace the existing station draining adjacent agricultural lands.

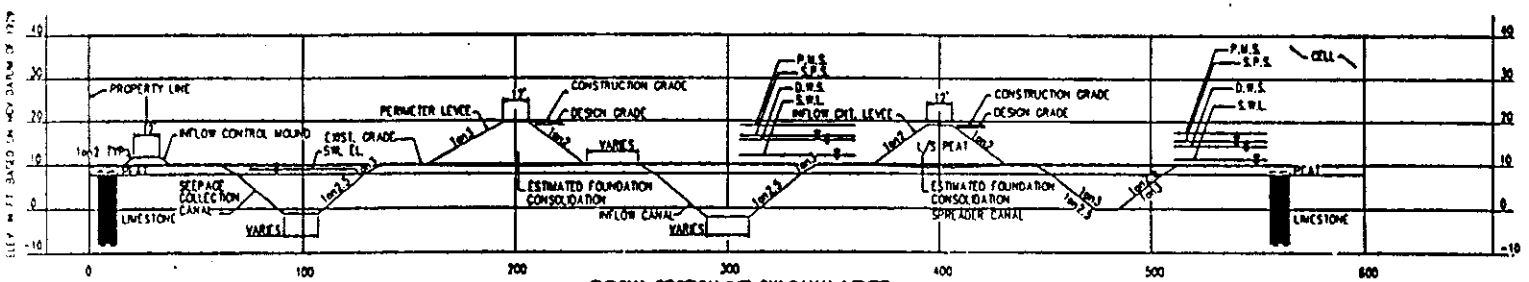
Treatment Areas. Excavate Inflow canal, with parallel perimeter levee, seepage canal, inflow control mound on the side toward the agricultural lands and a perimeter levee, spreader canal, and control structures G329A-F, G331A-L, and G333A-I to distribute water into the treatment cells. Construction of a West Perimeter Levee and seepage canal. Construction of pump station G-337 for seepage return. Enlarge and raise existing embankment between Cells 1 and 2 as an Interior Levee 1, including, for part of the length, excavation of a Collection Canal for Cell 2. Place fill to construct a new Interior Levee 2 between Cells 2 and 3. "Degrade" berms and fill agricultural canals within the cells.

Discharge Canal. Construction of a Discharge Canal along the south perimeter of the treatment cells, with a parallel collection canal and control structures G330A-H to pass flows from the treatment cells, and with a parallel perimeter levee, seepage canal, and inflow control mound adjacent to the agricultural lands. Construction of control structures G-332 and G-334 to control discharge from Cell 2 into the Discharge Canal. Construction of pump station G-335 to move treated water from the Discharge Canal to Borrow Canal L-6 (Hydropattern Restoration).

S-5A Diversion. Widening of certain length of Ocean and Hillsboro canals. Construction of two control structures G-340 and G-341.



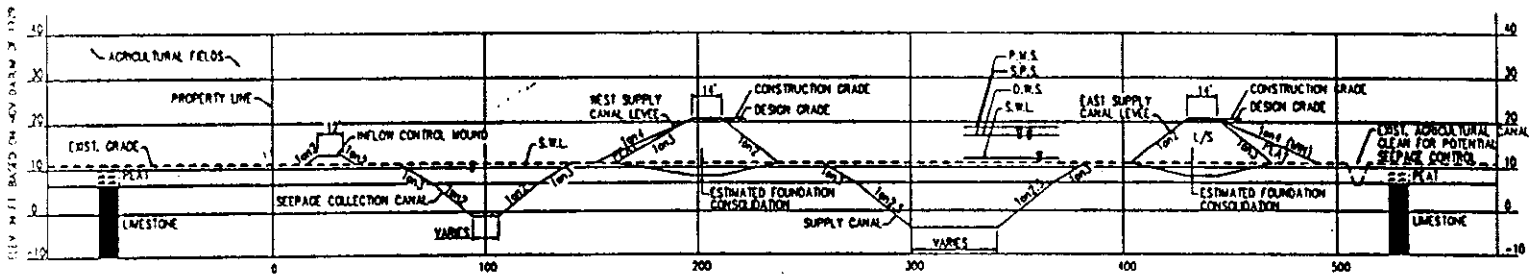
STA - 2 SITE PLAN
NOT TO SCALE



TYPICAL SECTION INFLOW CANAL LEVEE

HORIZONTAL SCALE IN FEET

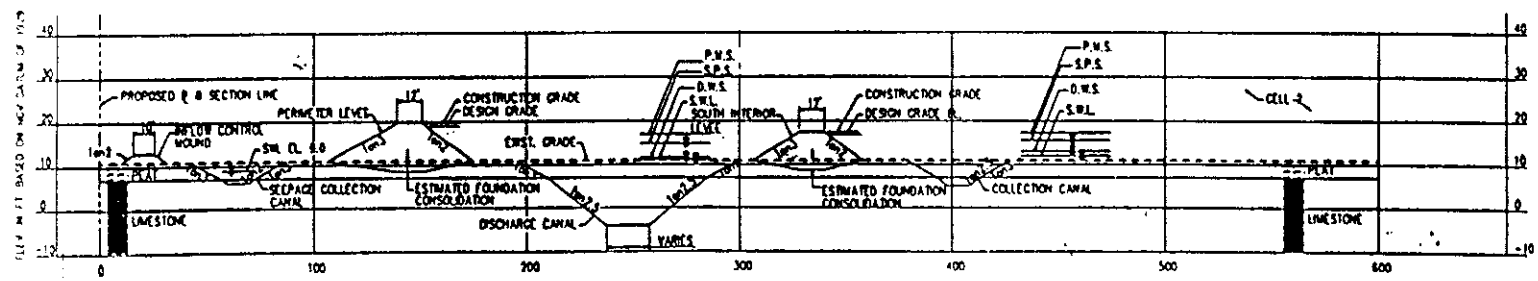
VERTICAL SCALE IN FEET



TYPICAL SECTION SUPPLY CANAL

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET



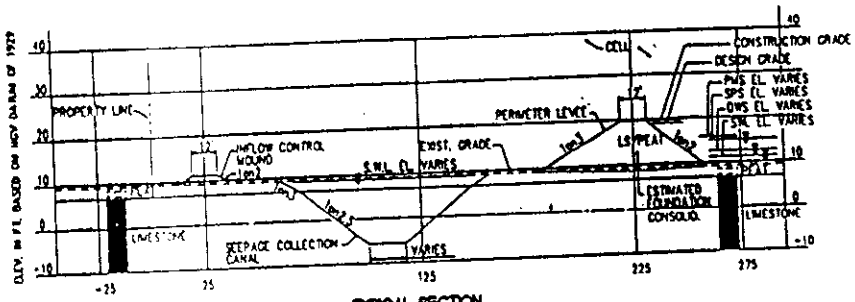
TYPICAL SECTION DISCHARGE CANAL

HORIZONTAL SCALE IN FEET

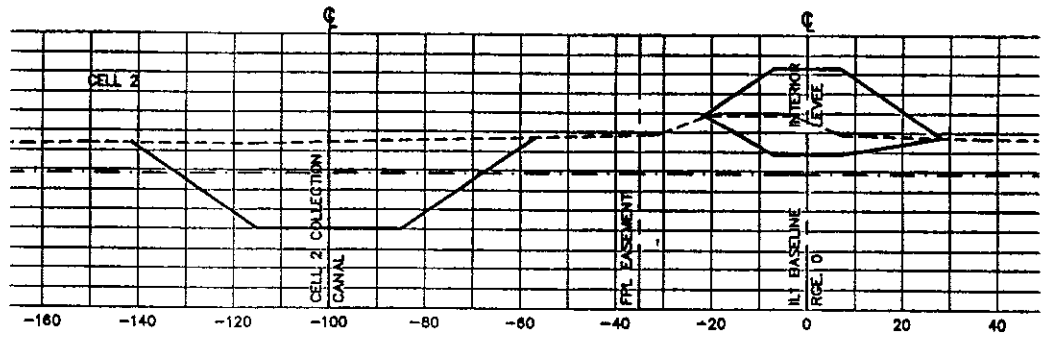
VERTICAL SCALE IN FEET

STA-2 TYPICAL CROSS SECTIONS

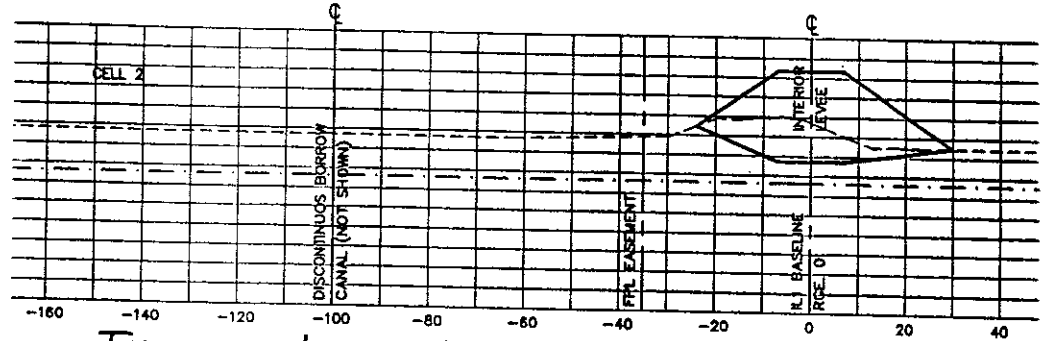
SCALE AS SHOWN



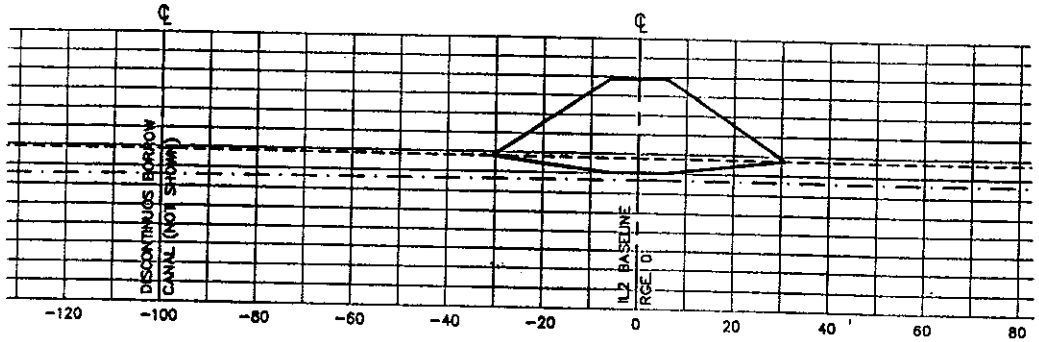
TYPICAL SECTION
WEST PERIMETER LEVEE



INTERIOR LEVEE 1 IL1 70+00

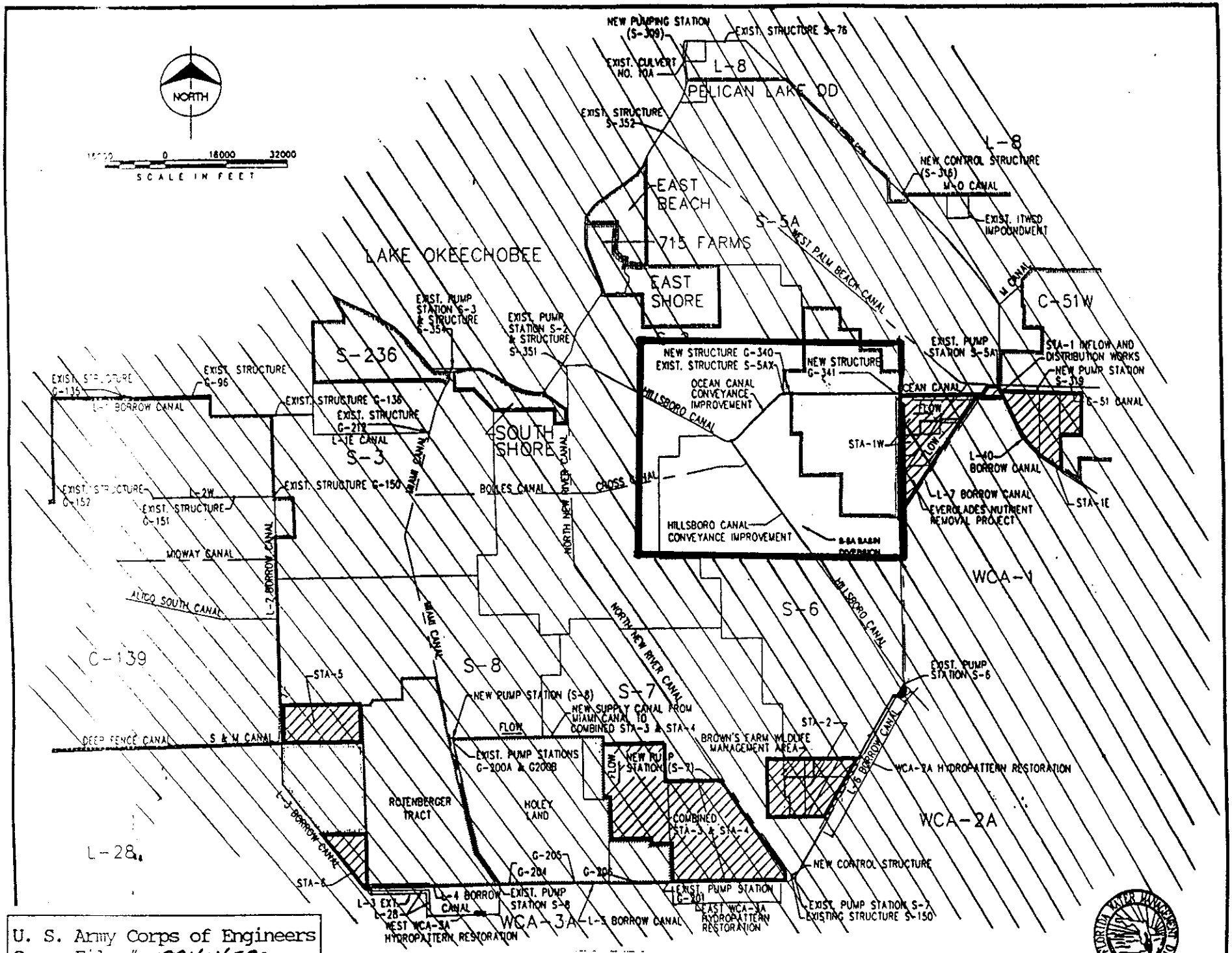


INTERIOR LEVEE 1 IL1 80+00



INTERIOR LEVEE 2 IL2 20+00

STA-2 TYPICAL CROSS SECTIONS
NOT TO SCALE



S-5A DIVERSION

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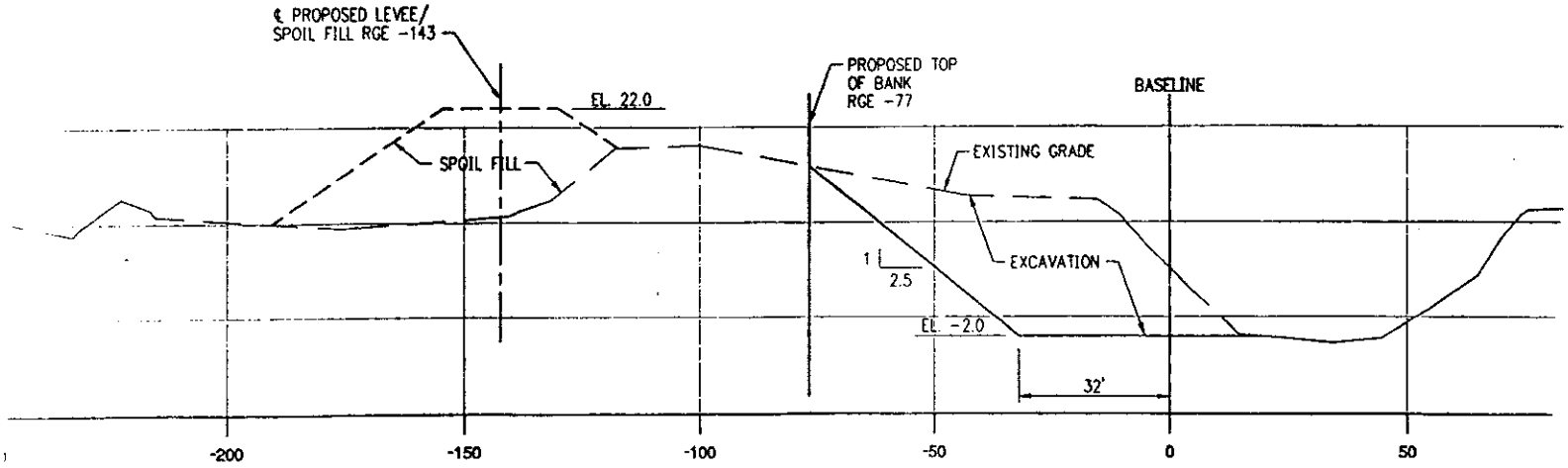
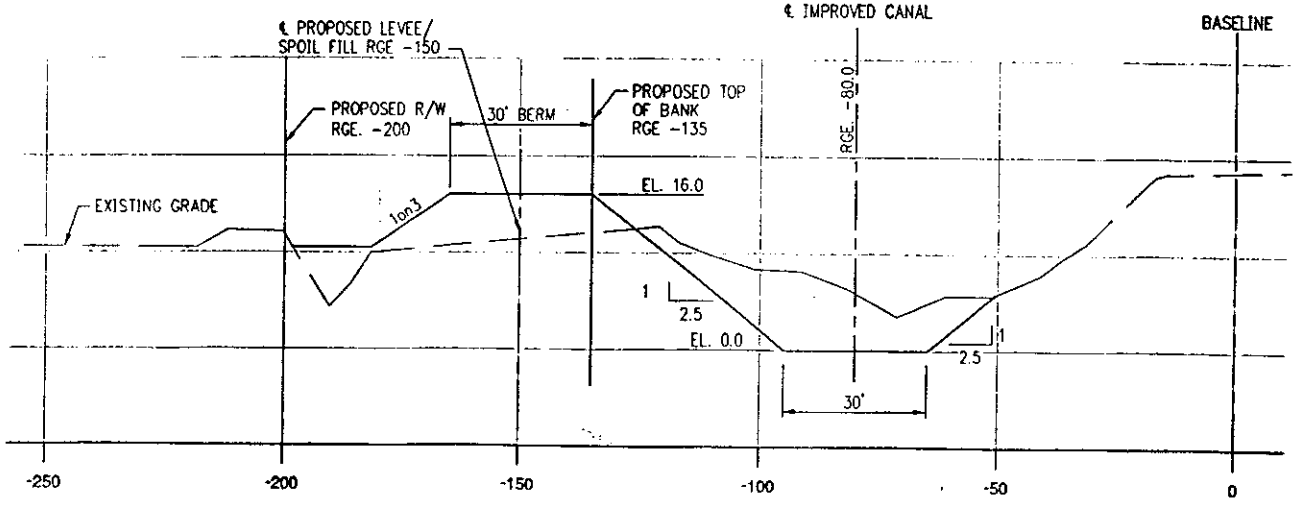
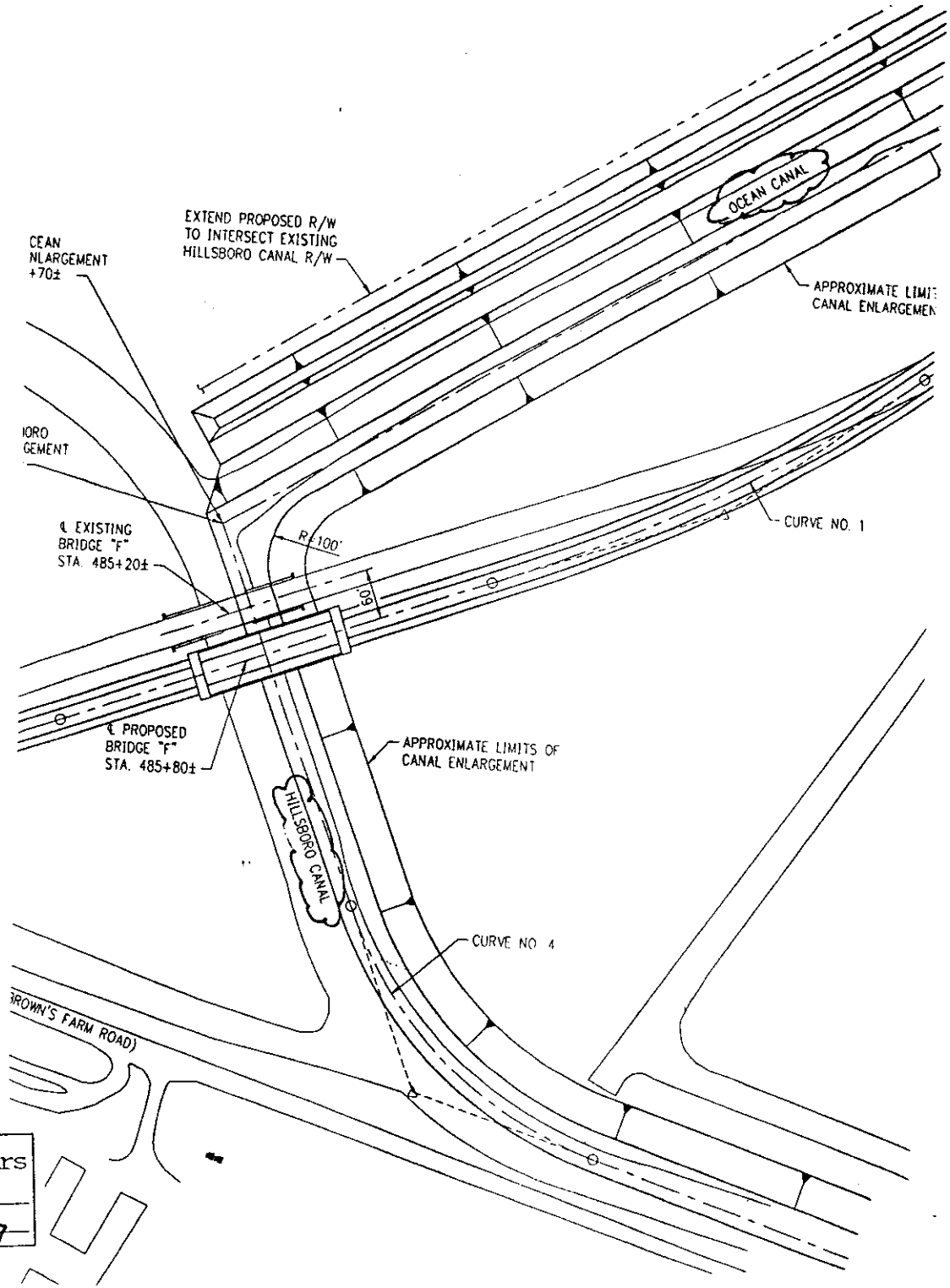


HILLSBORO CANAL (TYPICAL)



OCEAN CANAL (TYPICAL)

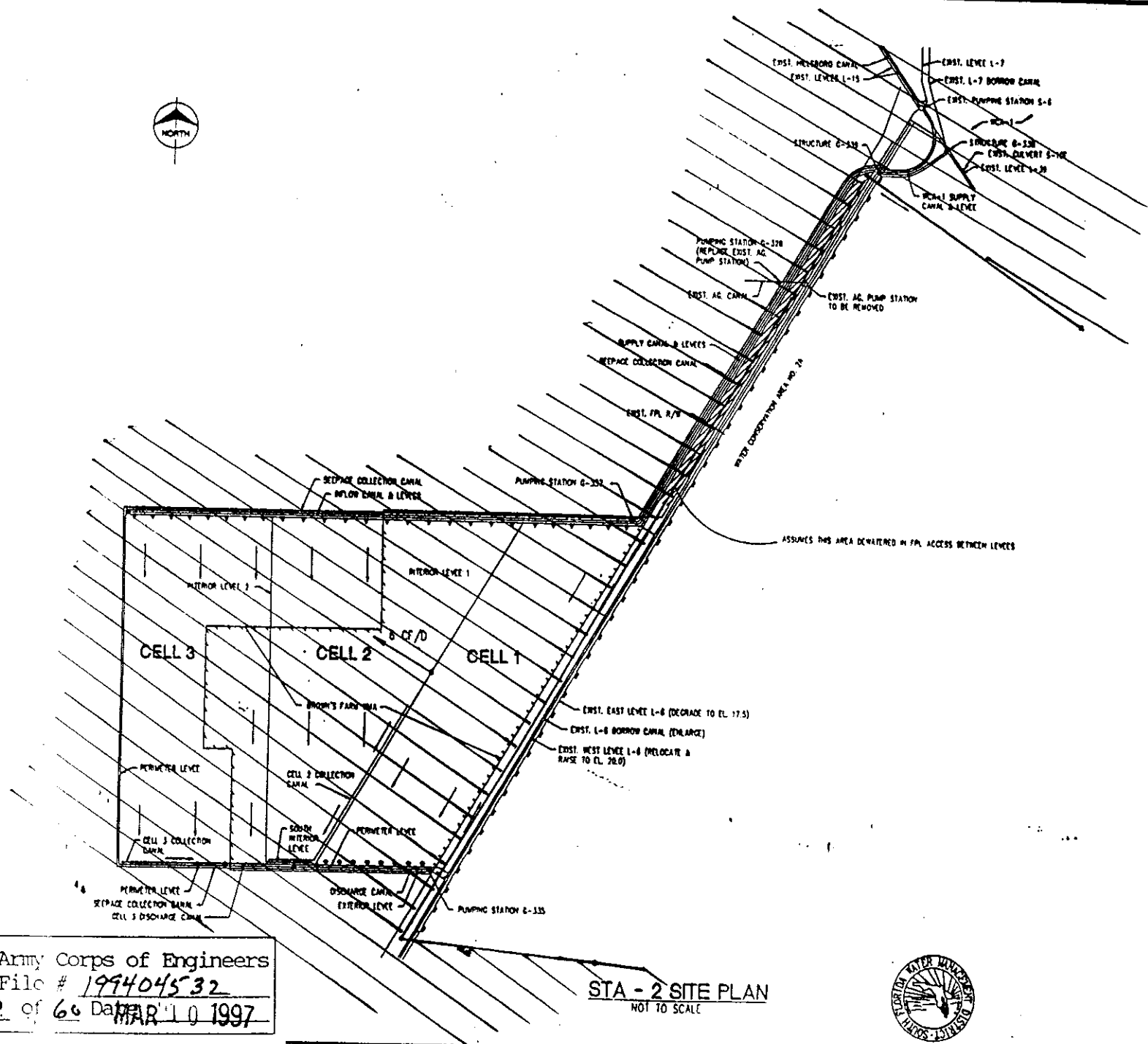


Enclosure C

Hydroperiod Restoration
for
Water Conservation Area 2A

This project will enlarge borrow canal L-8, improve the east levee, and degrade the west Levee to direct flow of treated water from Stormwater Treatment Area 2 into approximately 7.5 miles of the northwest perimeter of Water Conservation Area 2A. In addition, a new control structure G338 will be constructed in the north end of the borrow canal and a new canal constructed to enable the diversion of treated water back to the Hillsboro Canal and Water Conservation Area 1. The works are described by the drawings on pages 19 to 20.

Specific construction activities include the following. Excavation to enlarge Borrow Canal L-4, which will general remove the existing West Levee L-6. Construction of a new West Levee L-6. Degrade East Levee L-6 to lower the top elevation for approximately 38,900 linear feet. Construction of a plug in Borrow Canal L-6 at the southern limit of the levee degradation.



STA - 2 SITE PLAN
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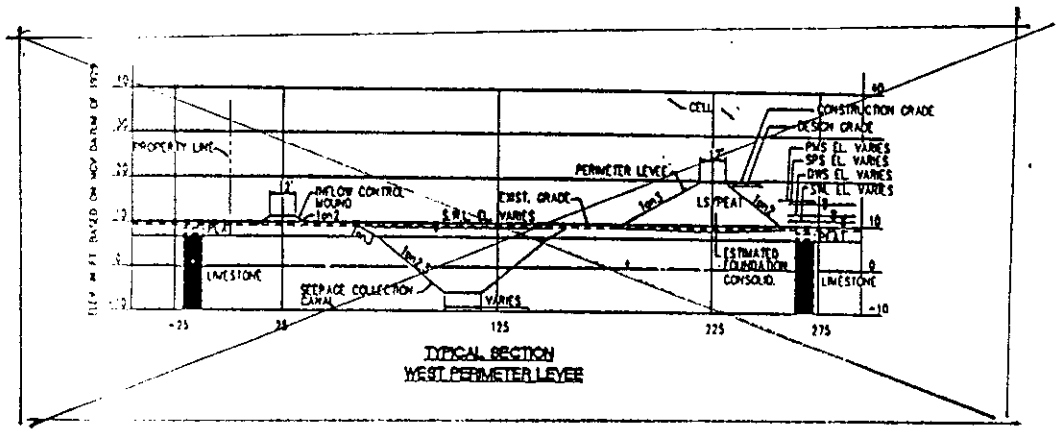
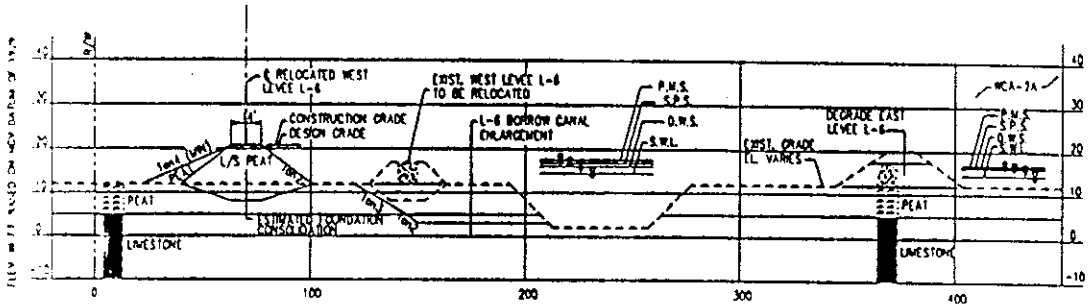


TYPICAL SECTION
WEST PERIMETER LEVEE



TYPICAL SECTION
L-6 BORROW CANAL ENLARGEMENT

STA-2 TYPICAL CROSS SECTIONS
NOT TO SCALE

Enclosure D

Stormwater Treatment Area 5

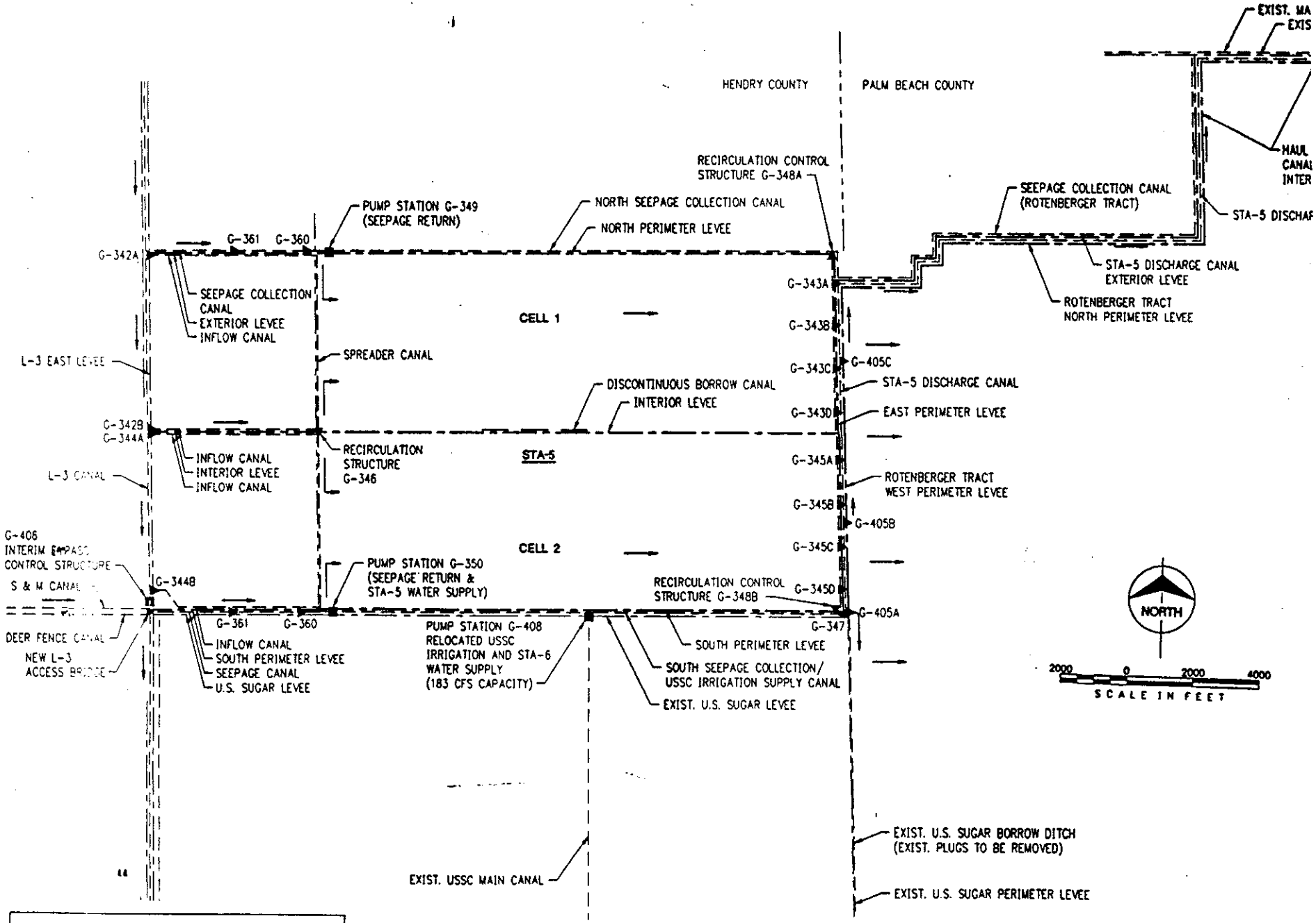
This project will: add a control structure in the L-3 canal and a pump station to divert water from that canal; add perimeter levees and seepage canals and pump stations to flood certain agricultural lands to create two treatment cells; add structures, canal, and levees to discharge the treated flow to the Miami Canal. The project will provide an effective treatment area of 3,550 acres. The works are described by the drawings on pages 22 to 26.

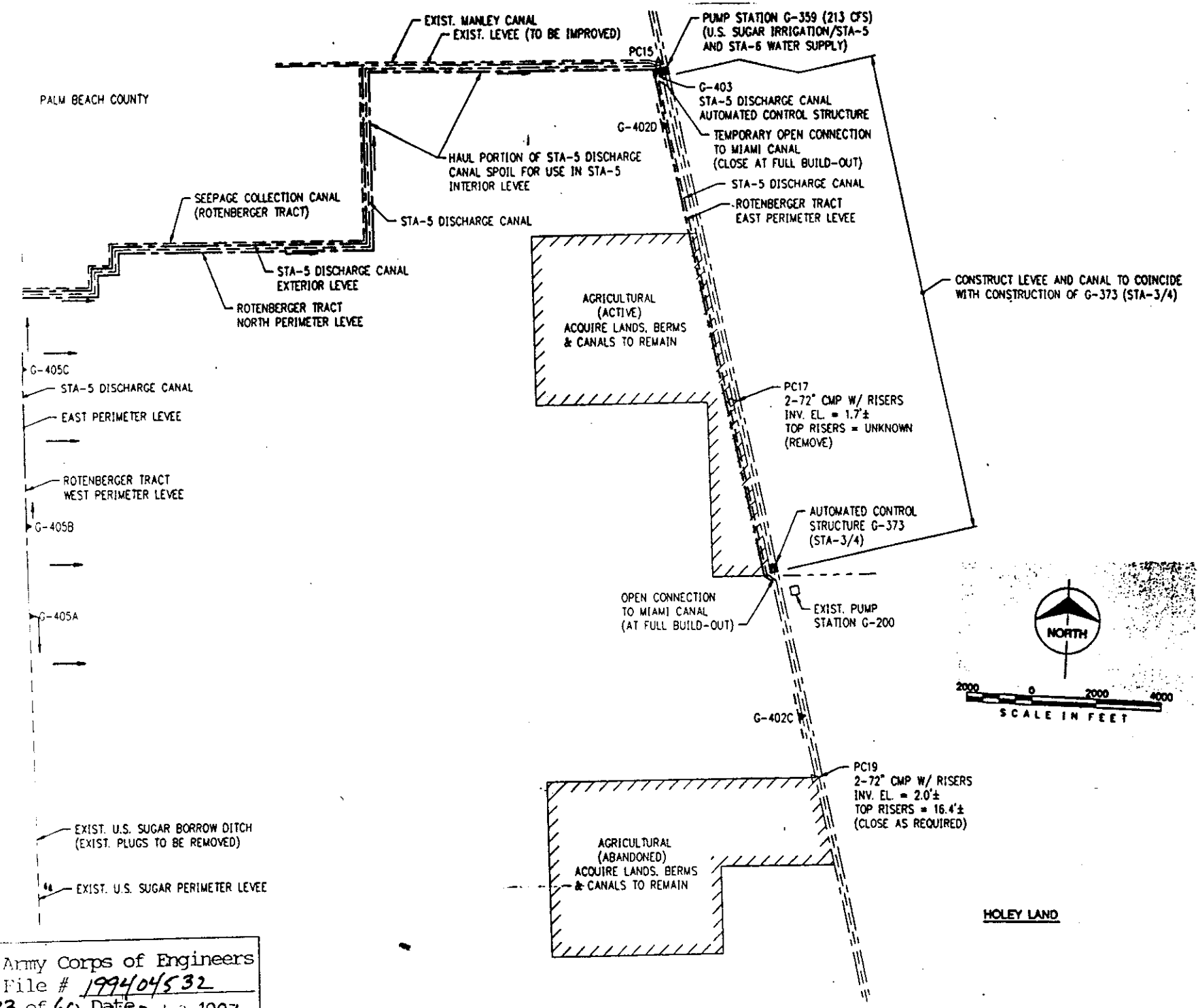
Specific construction activities include the following.

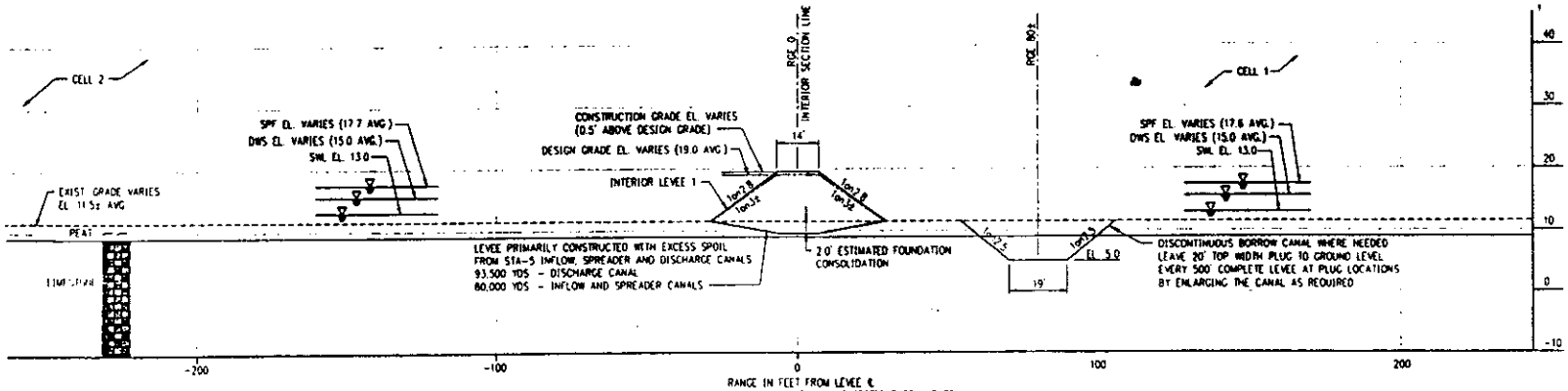
Treatment areas. Construction of perimeter levees, inflow canals, collection canals, pump stations, and control structures to form treatment cells 1 and 2.

Discharge canal. Excavation of a Discharge Canal and parallel perimeter levees along the east perimeter of treatment cells 1 and 2, including control structures G-405A-C to pass treated water to the Rotenberger Restoration. Extensiong of Discharge Canal to a new Structure G-403 on the Miami Canal. Construction of pumping station G-359 on the Miami Canal to, when needed, pump water from the Miami Canal back along the Discharge Canal to STA-5, STA-6, and U.S. Sugar Corporation Unit 2.

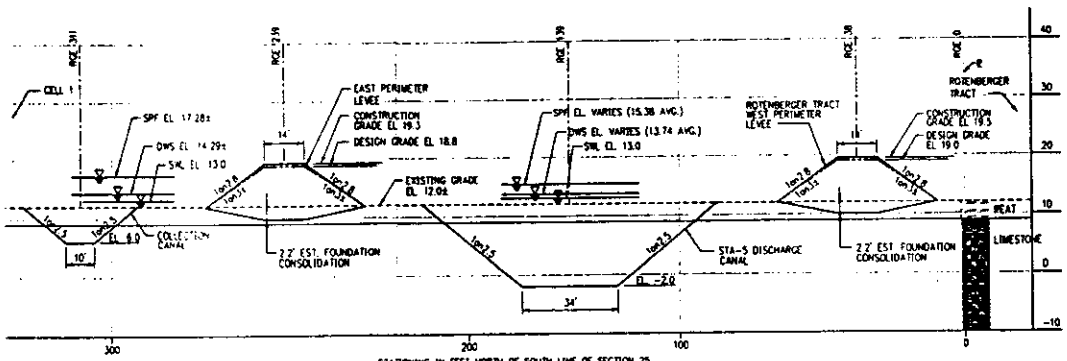
Extension of Discharge canal. Extension of Discharge Canal south from G-403 through the Rotenberger and agricultural lands to intersect with the Miami Canal south of the control structure G-373 (inflow control structure to be constructed for Stormwater Treatment Area 3/4)



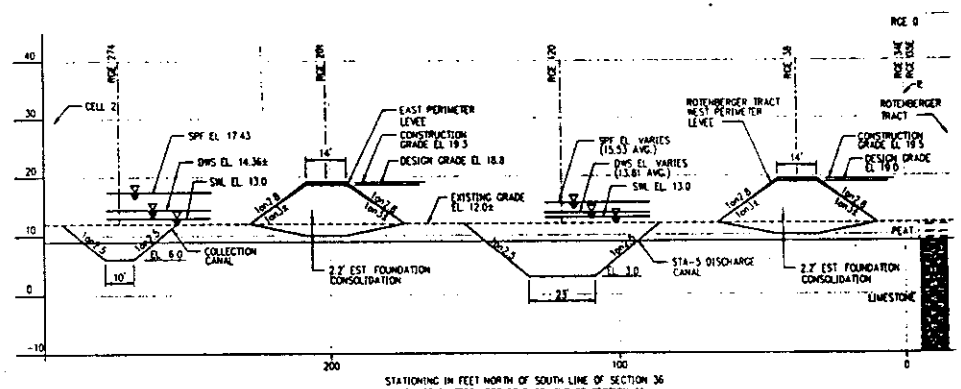




TYPICAL SECTION INTERIOR LEVEE 1
STA 2+01 TO STA 158+40



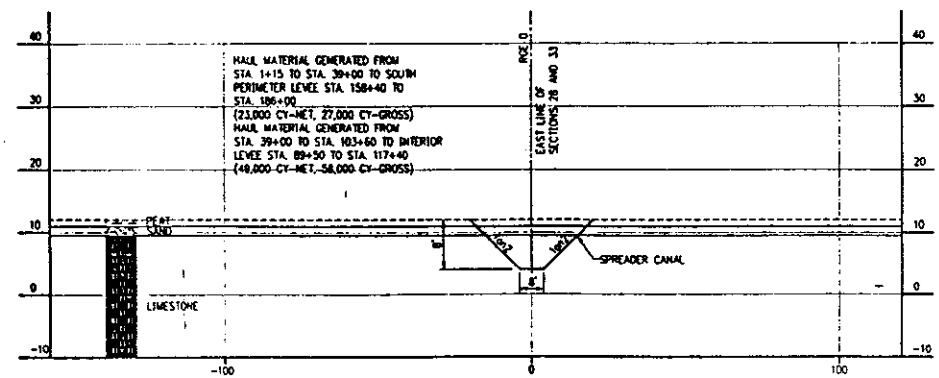
ADJACENT TO CELL 1
STA 0+00 TO STA 50+87



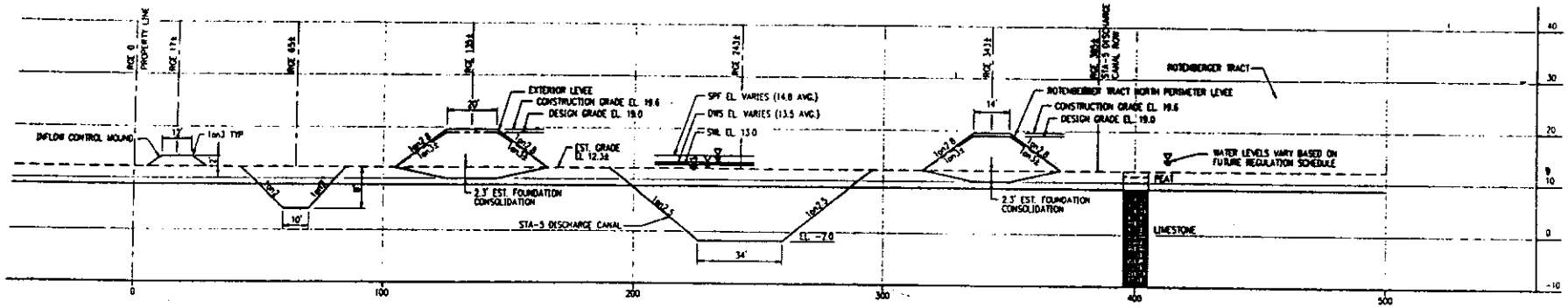
ADJACENT TO CELL 2
STA 0+00 TO STA. 52+80

RANGE IN FEET WEST OF EAST LINE RANGE 34E

TYPICAL SECTIONS - EAST PERIMETER LEVEE



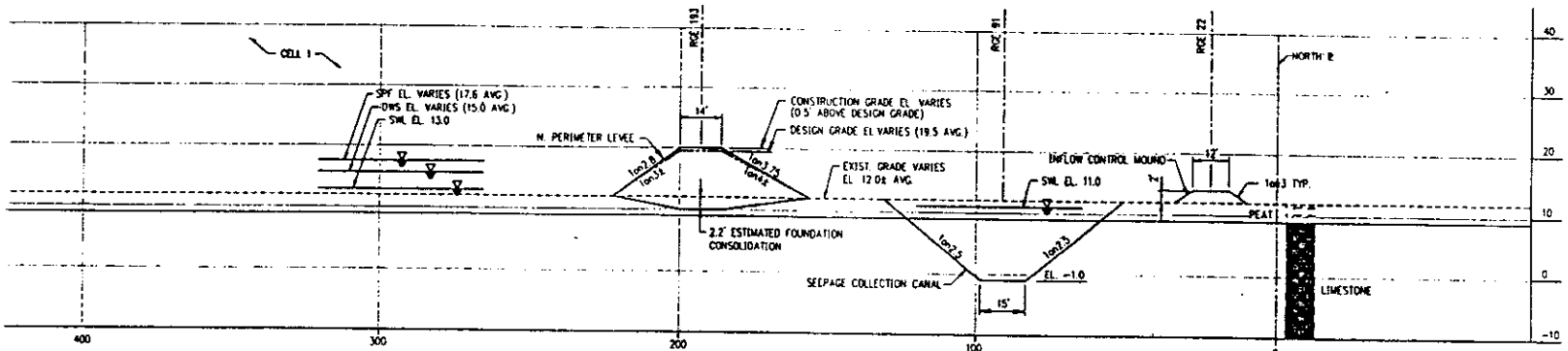
TYPICAL SECTION SPREADER CANAL
STA. 1+15 TO STA. 103+60



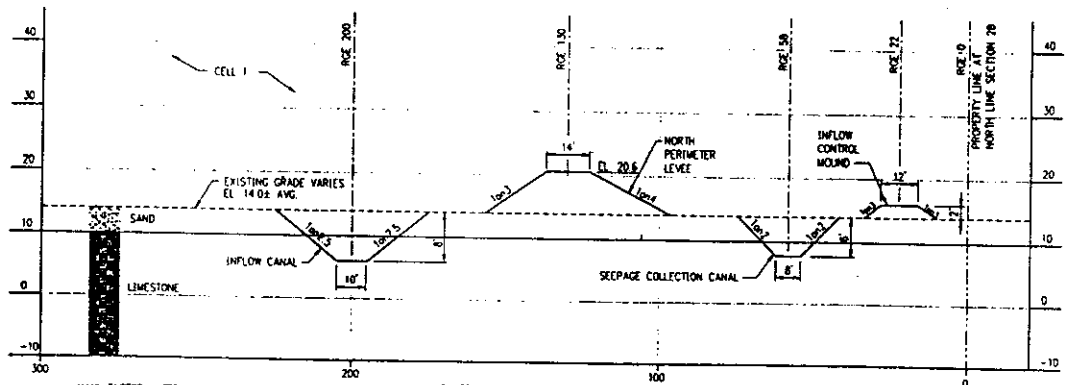
RANGE IN FEET SOUTH OR EAST OF PROPERTY LINE
TYPICAL SECTION STA-5 DISCHARGE CANAL STA 86+60 TO STA 285+00

HORIZONTAL SCALE IN FEET
VERTICAL SCALE IN FEET

GENERAL NOTES:
1. WATER SURFACE ELEVATIONS:
SWL = STATIC WATER LEVEL
DWS = DESIGN WATER SURFACE (MAX OPERATIONAL DESIGN DEPTH)
SPF = STANDARD PROJECT FLOOD
2. ALL ELEVATIONS IN FT., NGVD.

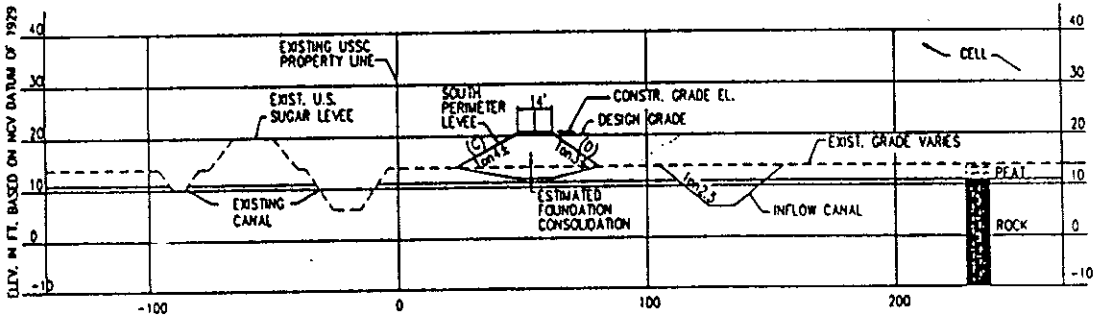


RANGE IN FEET SOUTH OF NORTH ℄ (NORTH LINE SECTIONS 22, 23, 24)
STATIONING IN FEET WEST OF EAST LINE OF SECTIONS 25 AND 26
TYPICAL SECTION NORTH PERIMETER LEVEE
STA 0+38 TO STA 158+40



HAUL EXCESS MATERIAL GENERATED TO INTERIOR LEVEE STA 154+00 TO STA 158+40 (8,000 CY NET - 9,000 CY GROSS)

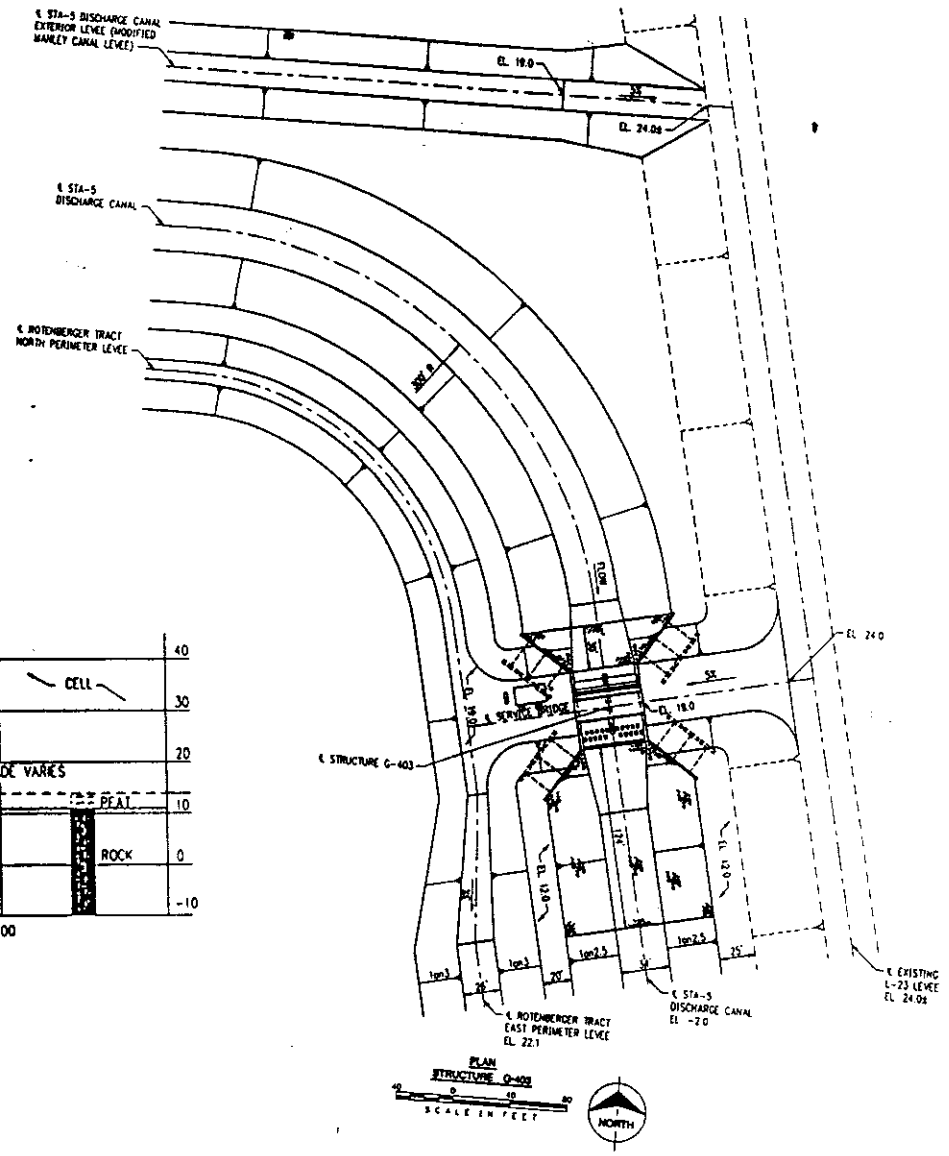
RANGE IN FEET SOUTH OF NORTH LINE SECTION 26
STATIONING IN FEET WEST OF EAST LINE OF SECTIONS 25 AND 36
TYPICAL SECTION NORTH PERIMETER LEVEE
STA 158+40 TO STA 211+20



TYPICAL SECTION SOUTH PERIMETER LEVEE

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET



PLAN
STRUCTURE G-403

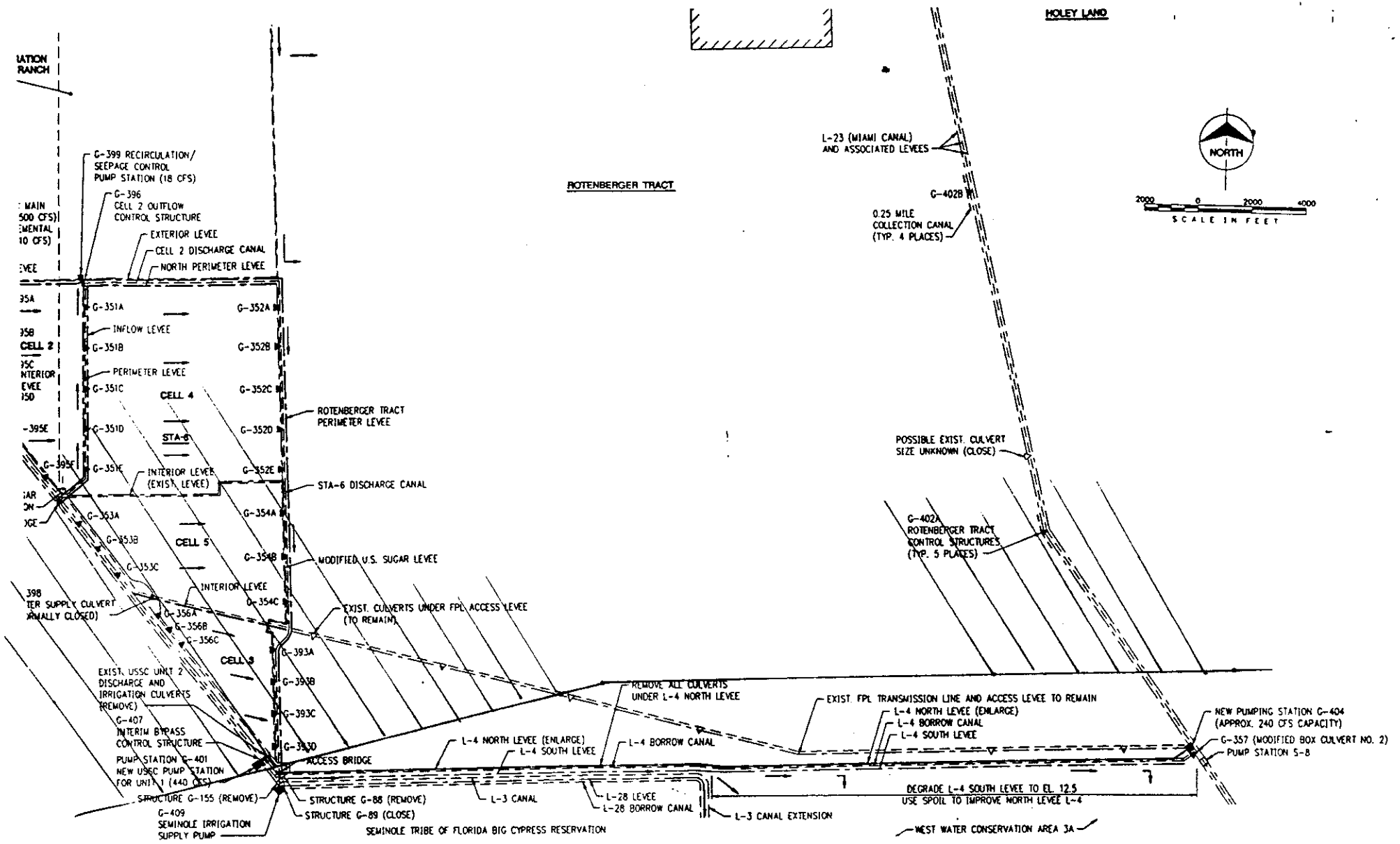
SCALE IN FEET

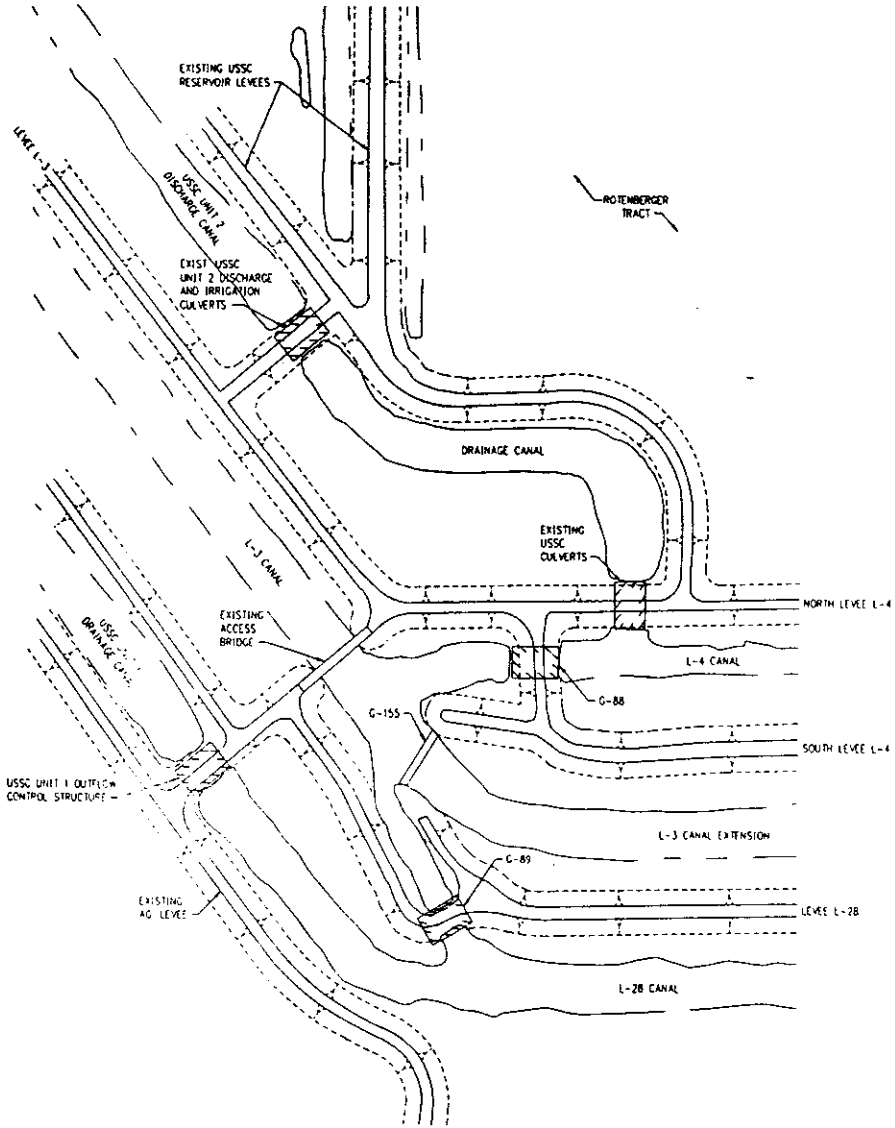
Enclosure E

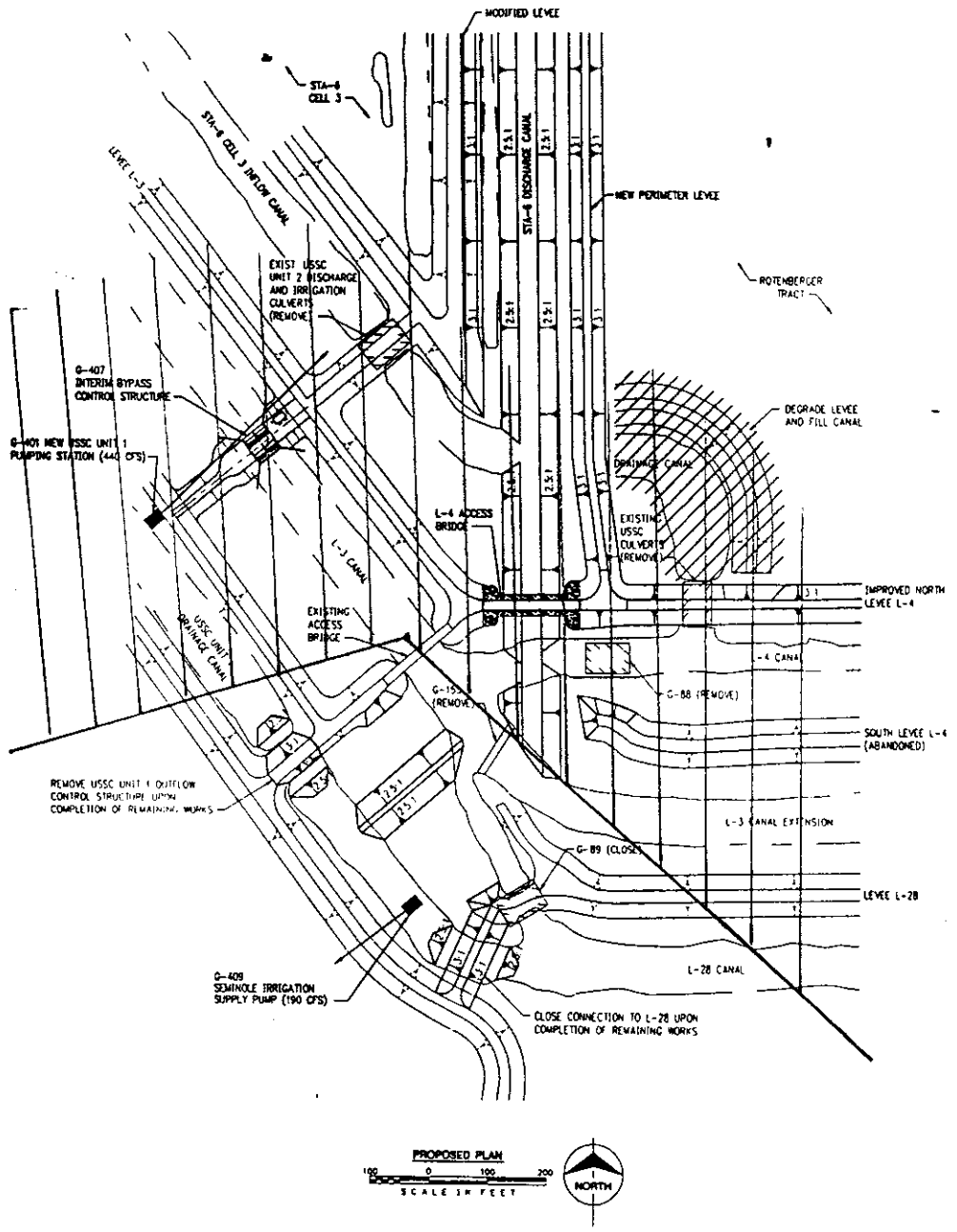
Hydropattern Restoration
for
Water Conservation Area 3A West

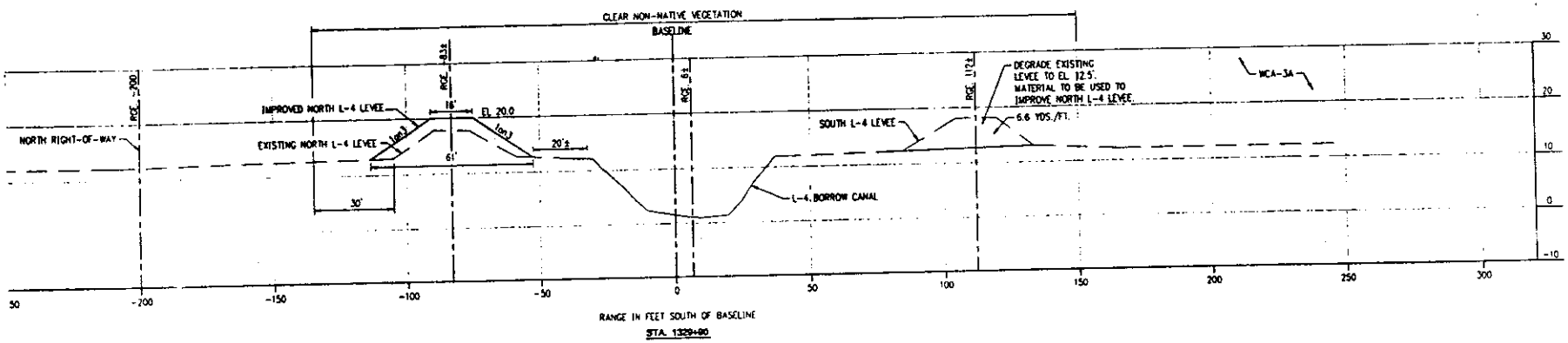
This project will: add to, remove, and modify control structures at the intersection of L-3 and L-4 to divert flow to the L-4 borrow canal; degrade south Levee L-4 and enlarge north Levee L-4 to discharge treated water across the south levee into Water Conservation Area 3A; add a pump station in the Miami Canal to divert flows into borrow canal L-4. The works are described by the drawings on pages 28 to 30.

Specific construction activities include the following. Degrade south Levee L-4 and enlarge north Levee L-4; Construct plugs in USSC Unit 1 Discharge Canal and L-28 Canal. Excavate canal to form a "pool" and construct pump station G-409 for Seminole Tribe Irrigation Supply. Add controls to culverts G-357 and construct pump station G-404 on the Miami Canal to direct water between the Miami Canal and the L-4 borrow canal.







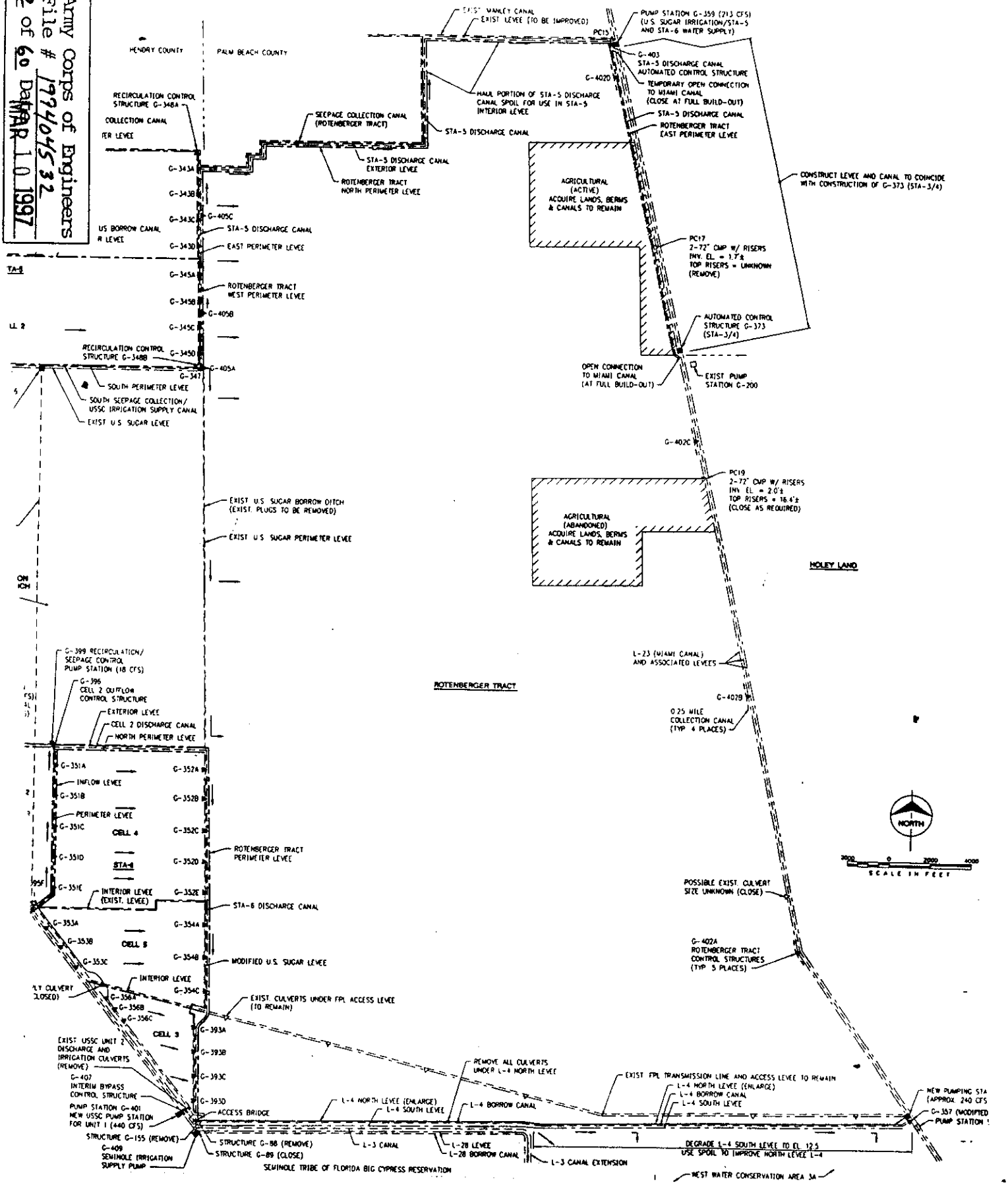


Enclosure F

Rotenberger Restoration

This project will: utilize control structures to route the treated water from Stormwater Treatment Area 5 along the west perimeter of the Rotenberger tract; and, add control structure along the east perimeter to discharge into Miami Canal. The works are described by drawings on page 32.

Specific construction activities include the following. Installation of collection canals and control structures G-402A-C along the Miami Canal and G-402D into the STA-5 Discharge Canal extension. Removal of culverts along the north levee of L-4.

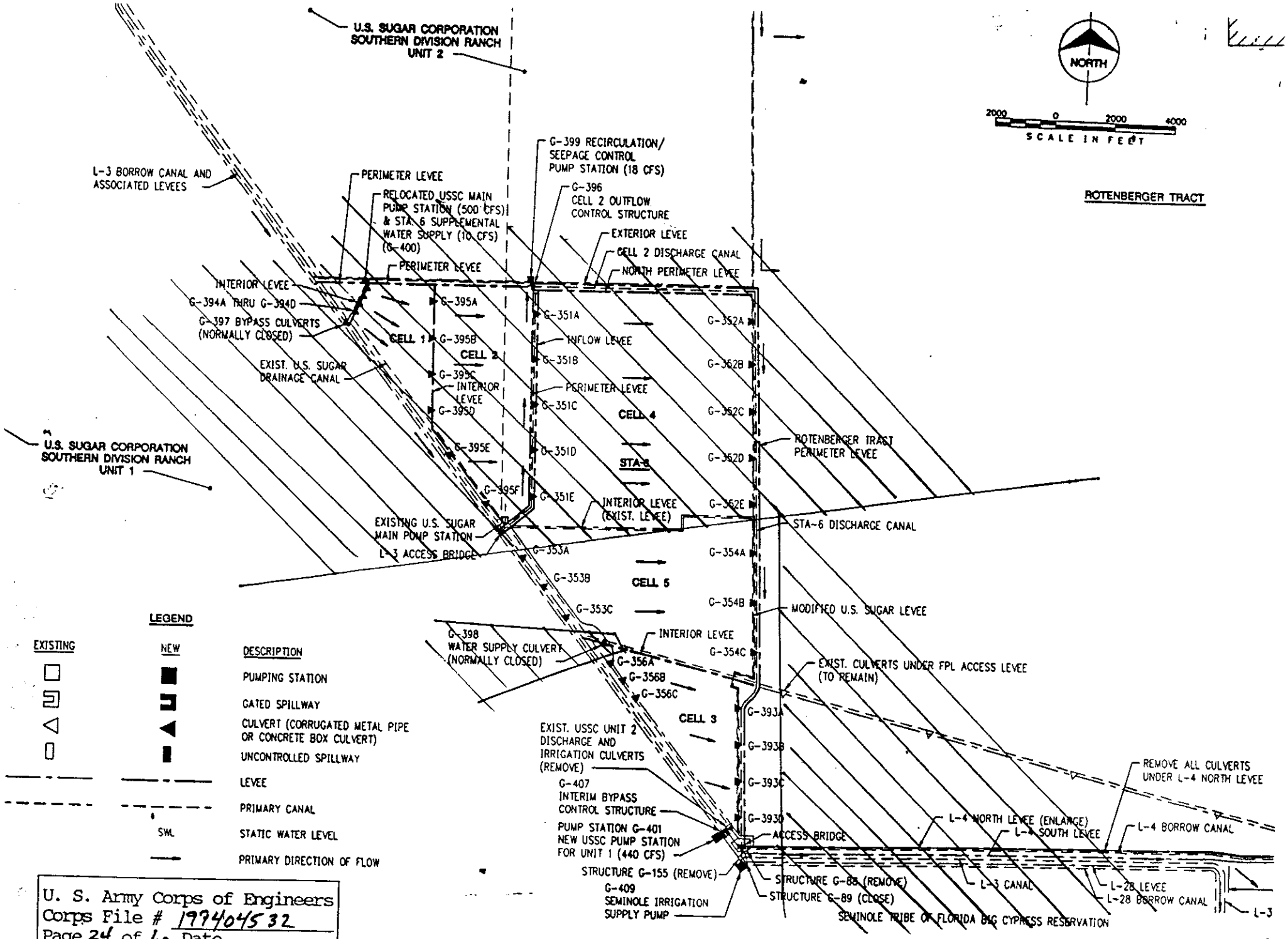


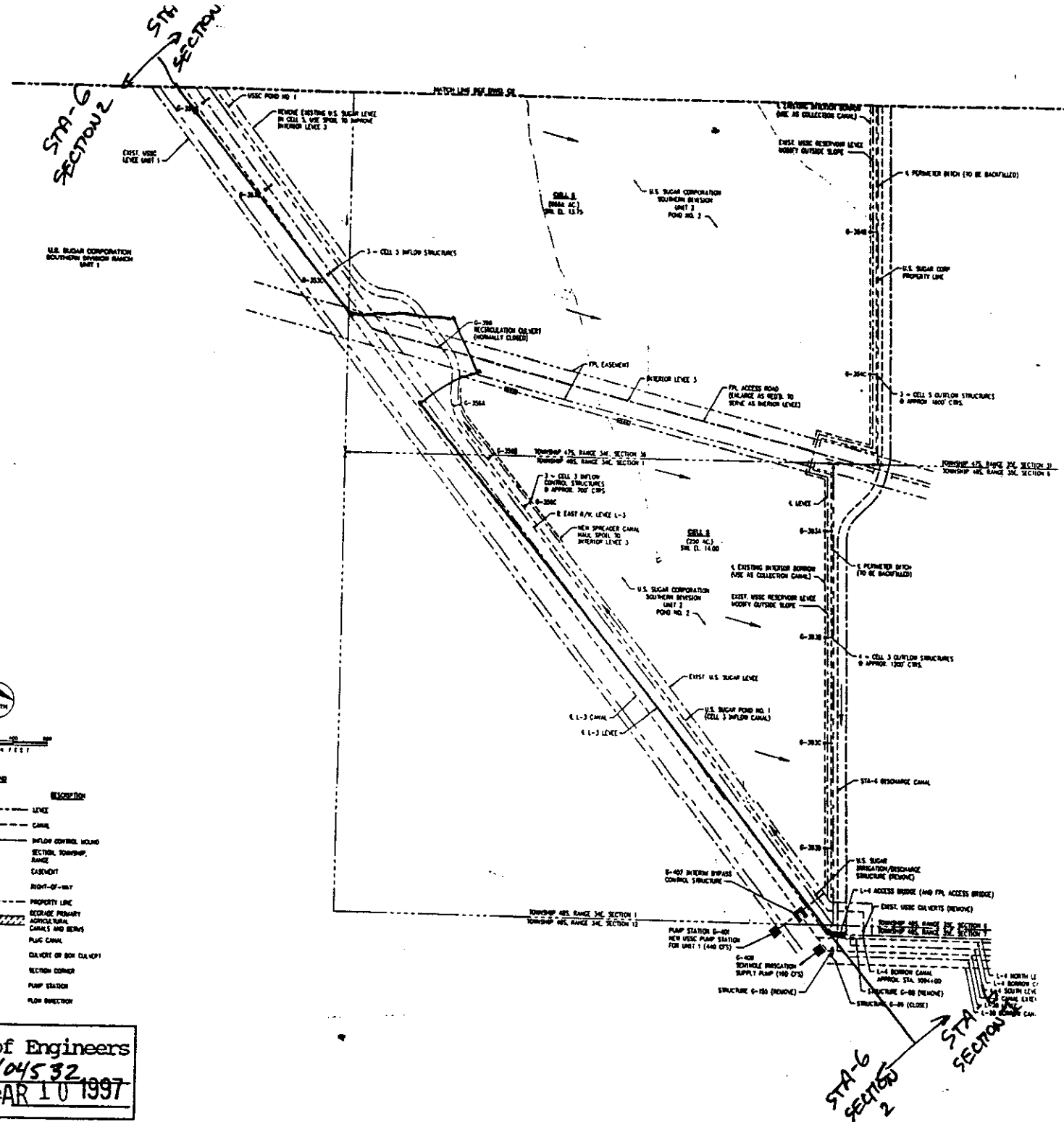
Enclosure G

Stormwater Treatment Area 6 - Section 1

This project will: breach the existing levee along the west perimeter of Pond 2 of the existing retention area for U.S. Sugar Corporation, Southern Division Ranch, Unit 2; add control structures and a collection canal along the east perimeter; and, add a canal to discharge the treated water to the intersection of canals L-3 and L-4. This will result in the establishment of two treatment cells, numbered 3 and 5, that will continue to treat the runoff from Unit 2. The effective treatment area will be 812 acres. The works are described by the drawings on pages 34 to 40.

Specific construction activities include the following. Removal of west levee in Cell 5 separating Pond 1 from Pond 2. Addition of inflow control structures G356A-C through the west levee in Cell 3 separating Pond 1 from Pond 2. Construction of outflow control structures G354A-C and G393A-D through the existing east levee in Cells 3 and 5 to pass treated water to the Discharge Canal. Excavation of a Discharge canal from the northeast corner of Cell 5 south to the L-3 canal extension. Enlargement of FPL access road to serve as Interior Levee 3 between Cells 3 and 5.





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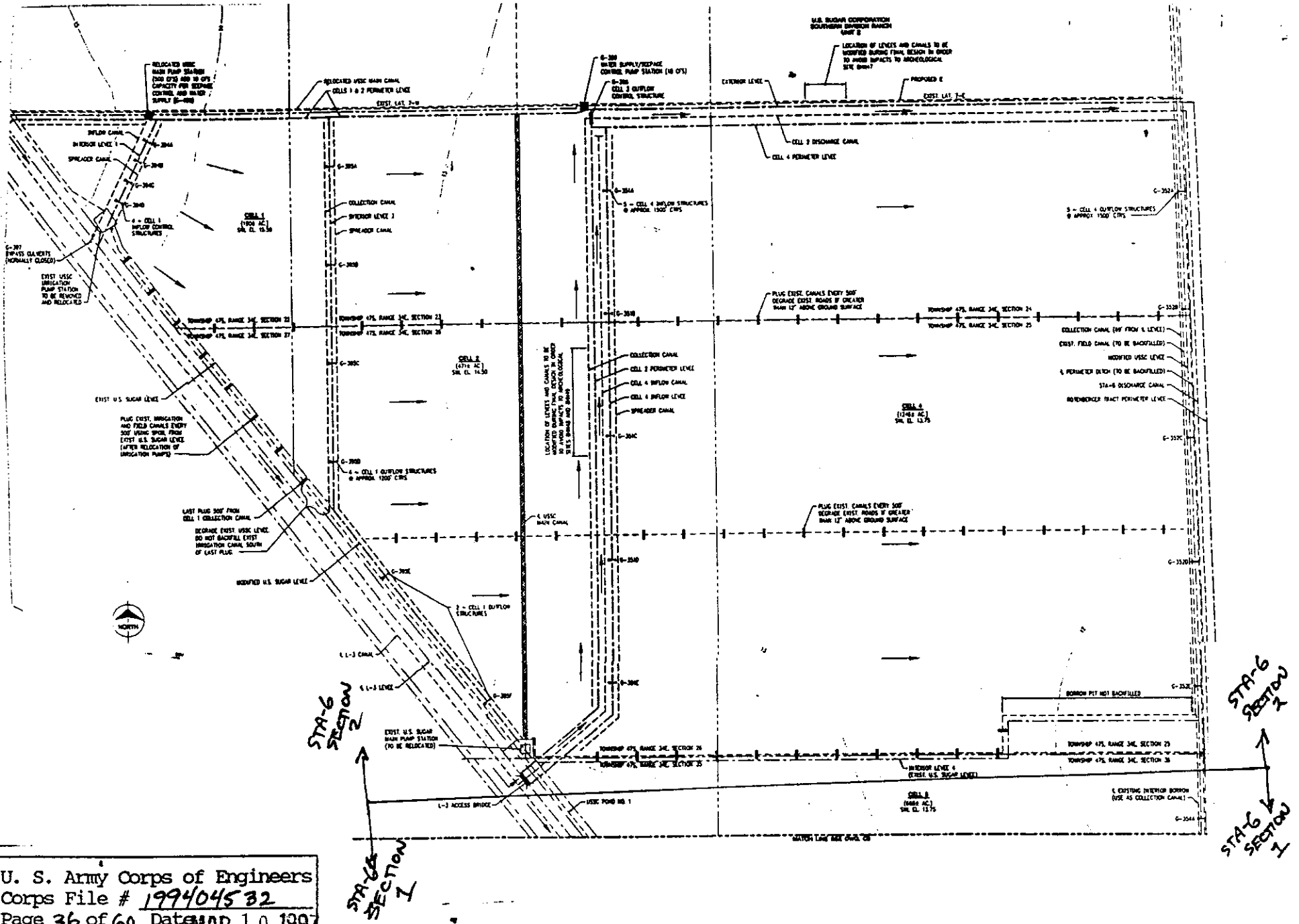
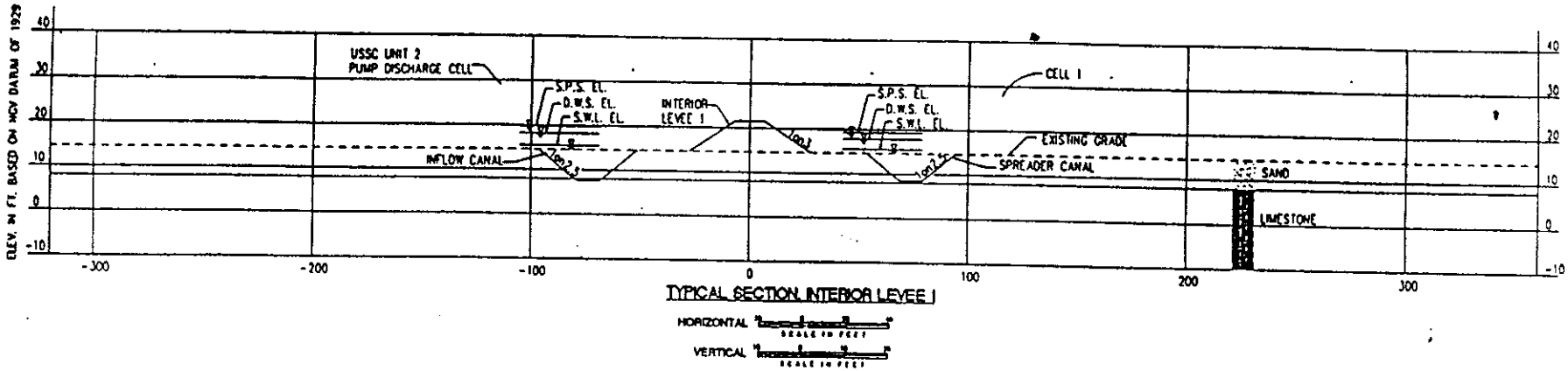
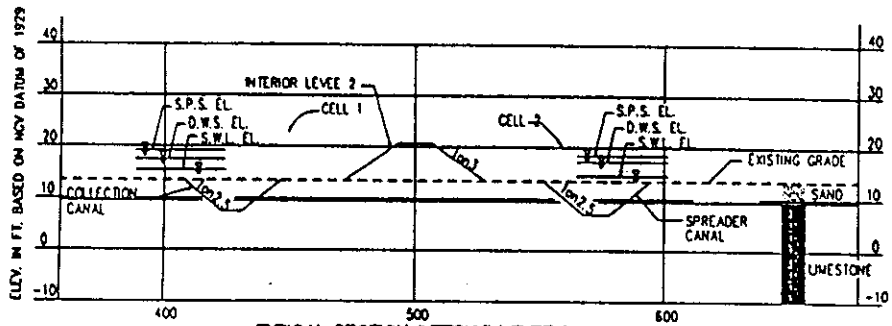




TYPICAL SECTION INTERIOR LEVEE 1

HORIZONTAL 1" SCALE IN FEET

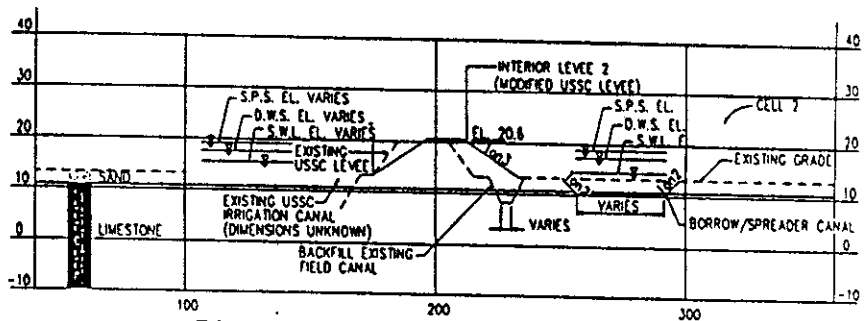
VERTICAL 1" SCALE IN FEET



TYPICAL SECTION INTERIOR LEVEE 2

HORIZONTAL 1" SCALE IN FEET

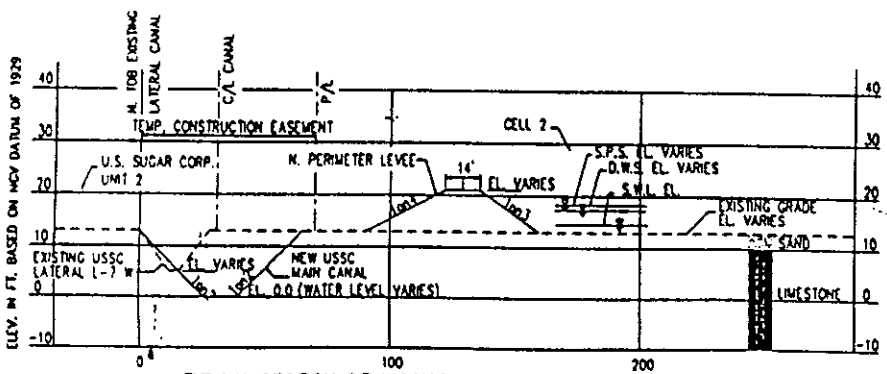
VERTICAL 1" SCALE IN FEET



TYPICAL SECTION INTERIOR LEVEE 2 ADJACENT TO L-3

HORIZONTAL 1" SCALE IN FEET

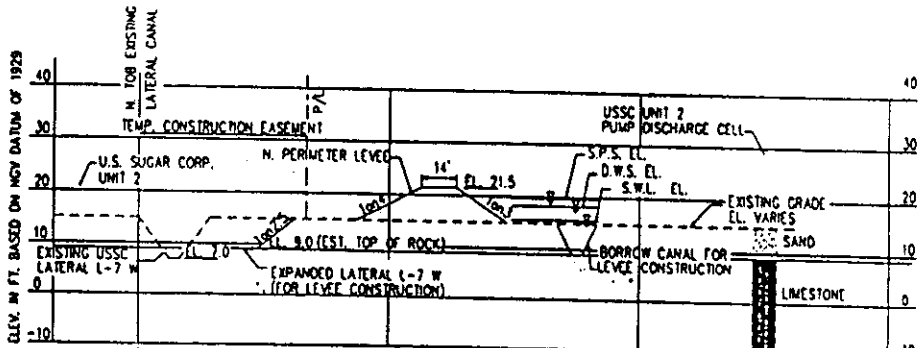
VERTICAL 1" SCALE IN FEET



TYPICAL SECTION CELL 2 NORTH PERIMETER LEVEE

HORIZONTAL 1" SCALE IN FEET

VERTICAL 1" SCALE IN FEET



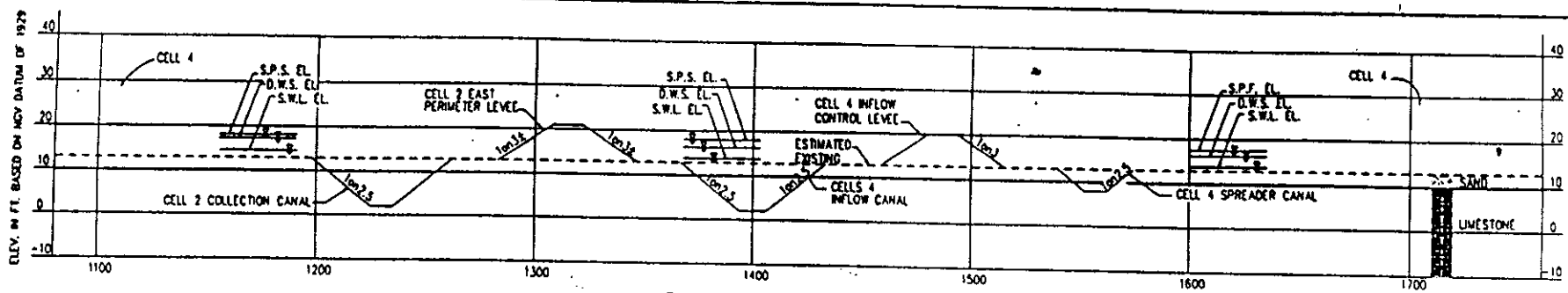
TYPICAL SECTION USSC PUMP DISCHARGE CELL NORTH PERIMETER LEVEE

HORIZONTAL 1" SCALE IN FEET

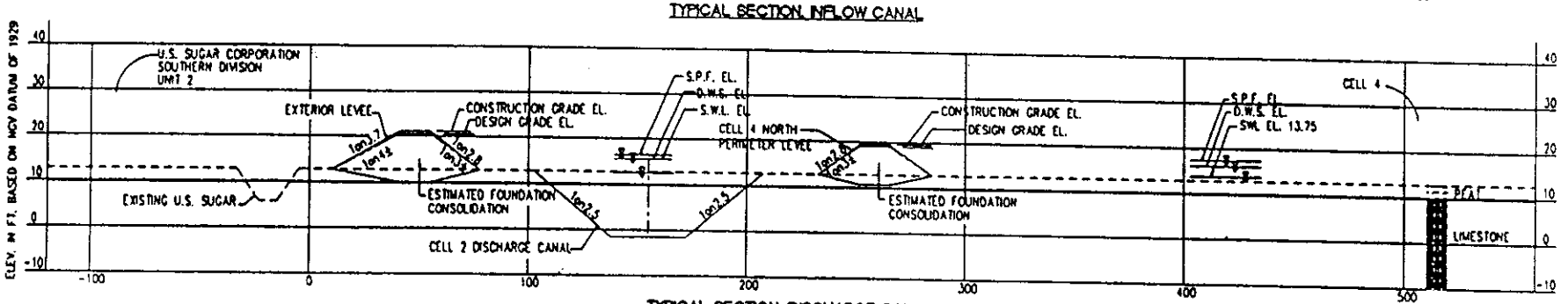
VERTICAL 1" SCALE IN FEET

TYPICAL CROSS SECTIONS STA -6

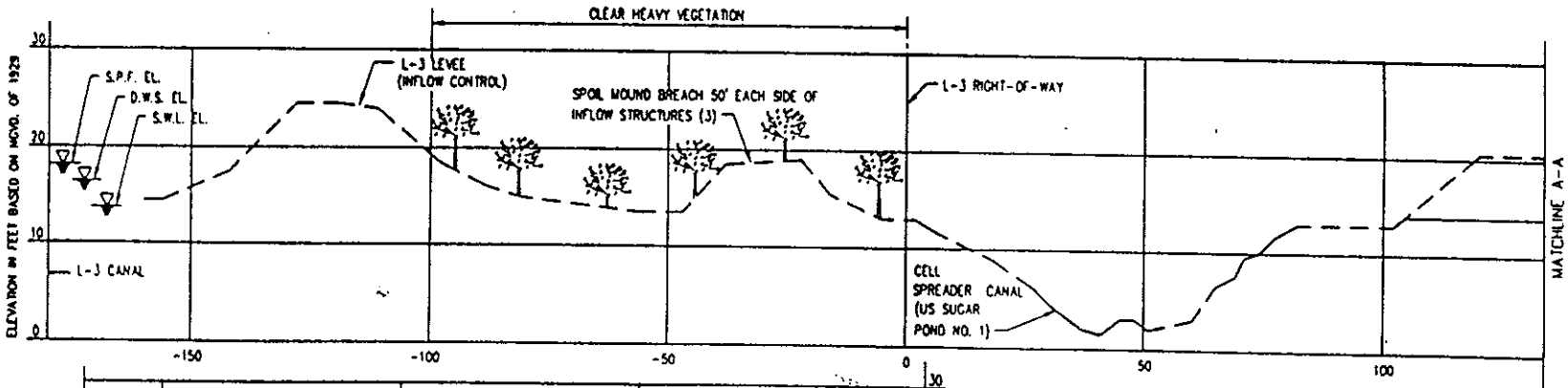
SCALE AS SHOWN

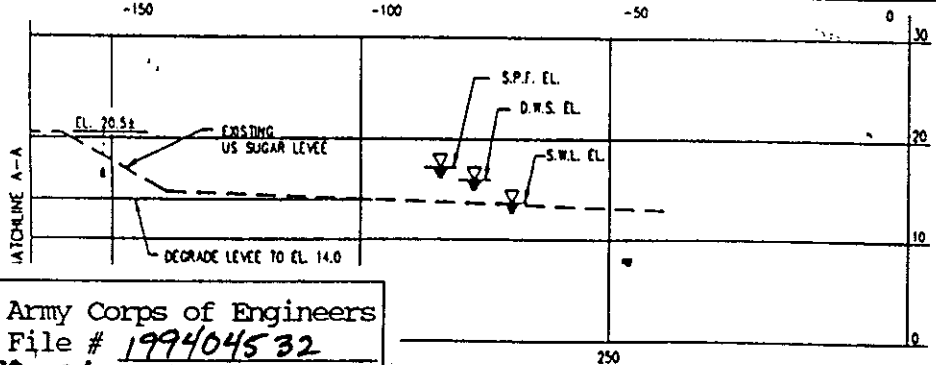


TYPICAL SECTION INFLOW CANAL



TYPICAL SECTION DISCHARGE CANAL





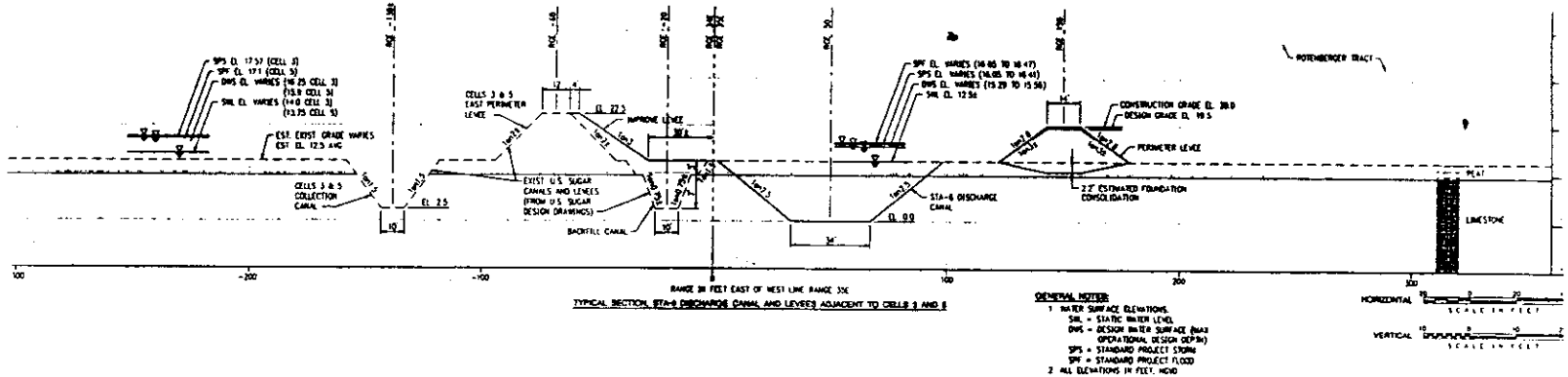
TYPICAL SECTION INFLOW CONTROL LEVEE AND SPREADER CANAL

HORIZ. 20 0 20 40 SCALE IN FEET

VERT. 10 0 10 20 SCALE IN FEET

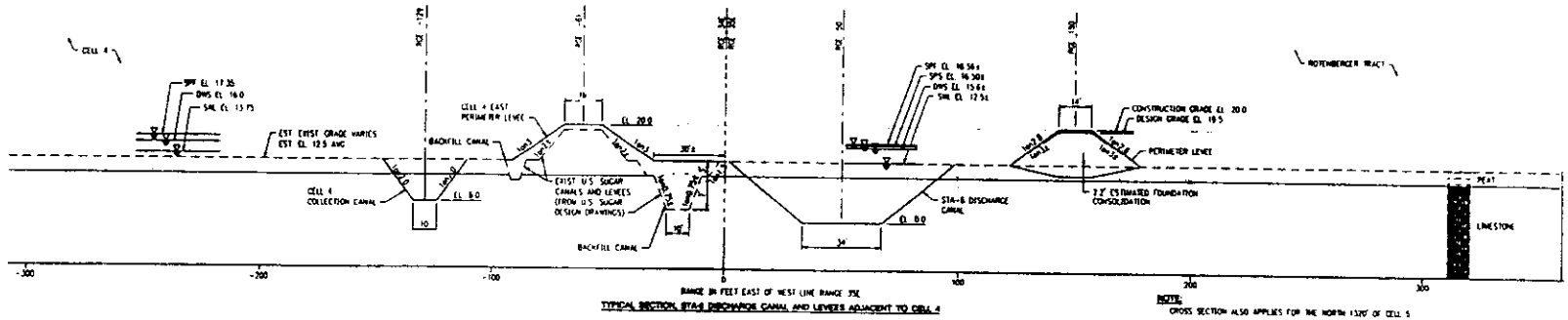
TYPICAL CROSS SECTIONS STA -6

SCALE AS SHOWN



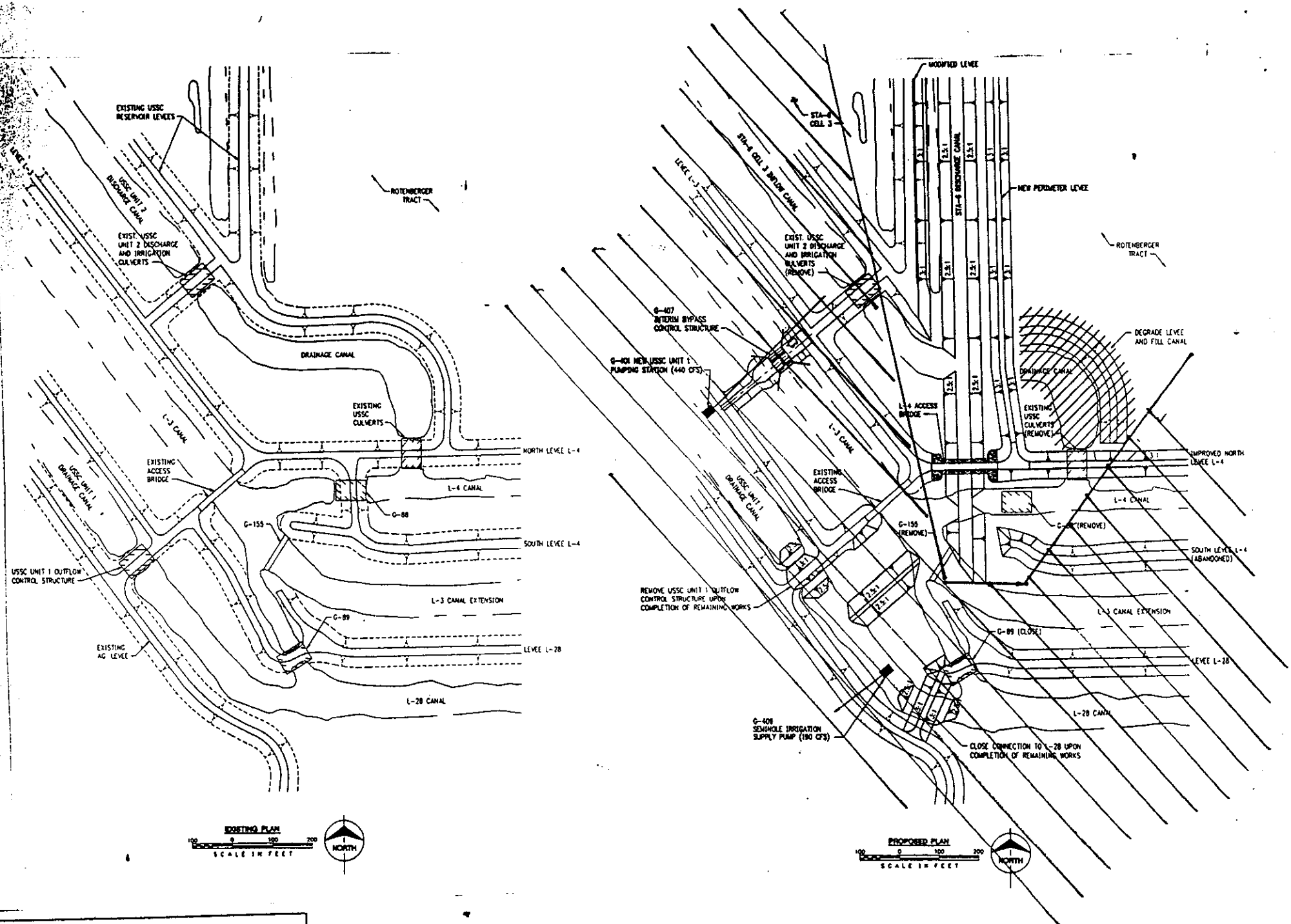
TYPICAL SECTION, STA-6 DISCHARGE CANAL AND LEVEES ADJACENT TO CELLS 3 AND 5

GENERAL NOTES:
1. WATER SURFACE ELEVATIONS
SWL = STATIC WATER LEVEL
DWS = DESIGN WATER SURFACE (MAX OPERATIONAL DESIGN DEPTH)
SPS = STANDARD PROJECT STORM
SPF = STANDARD PROJECT FLOOD
2. ALL ELEVATIONS IN FEET, NGVD



TYPICAL SECTION, STA-6 DISCHARGE CANAL AND LEVEES ADJACENT TO CELL 4

NOTE:
CROSS SECTION ALSO APPLIES FOR THE NORTH 1320' OF CELL 5



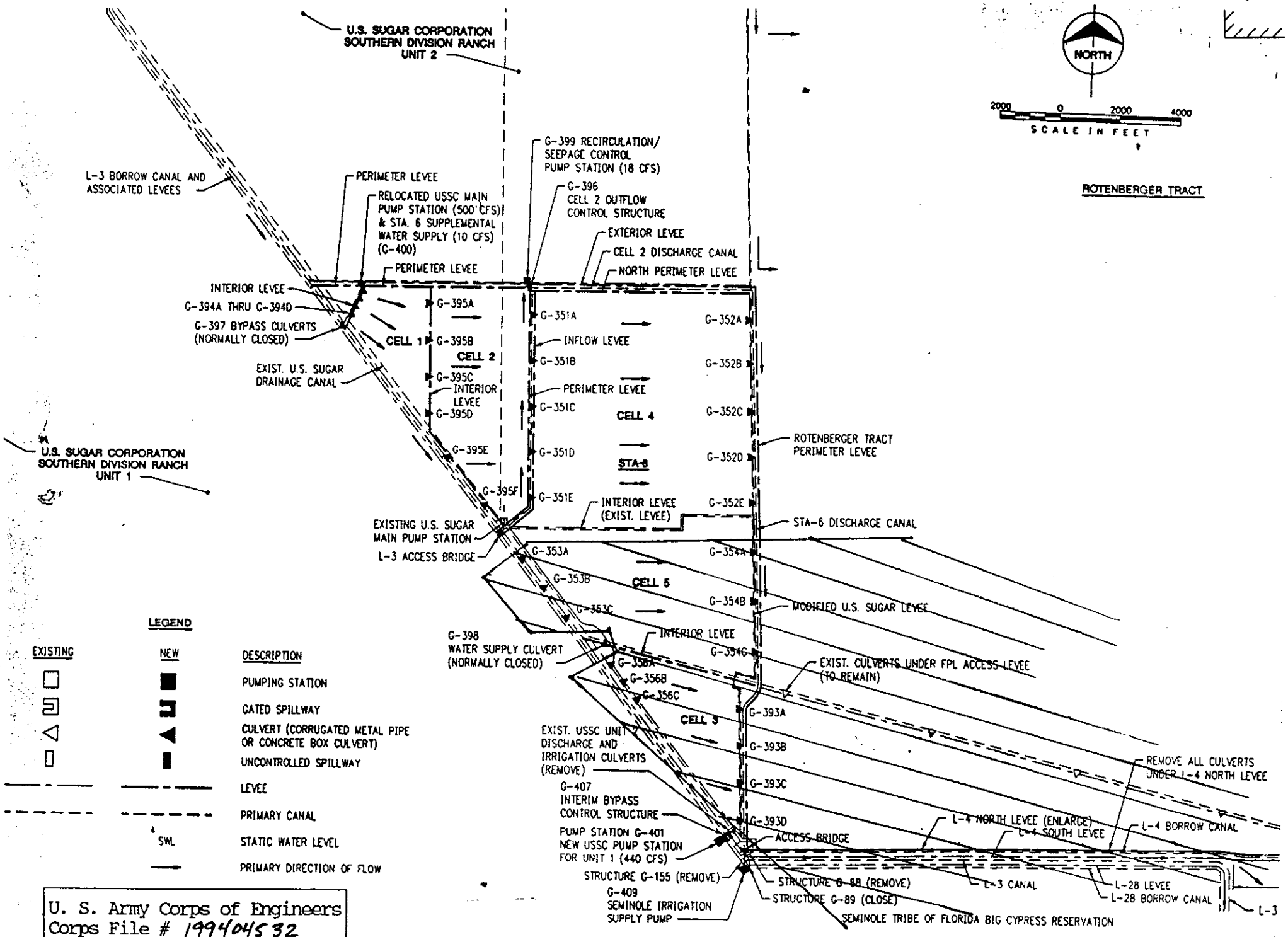
Enclosure H
Stormwater Treatment Area 6 - Section 2

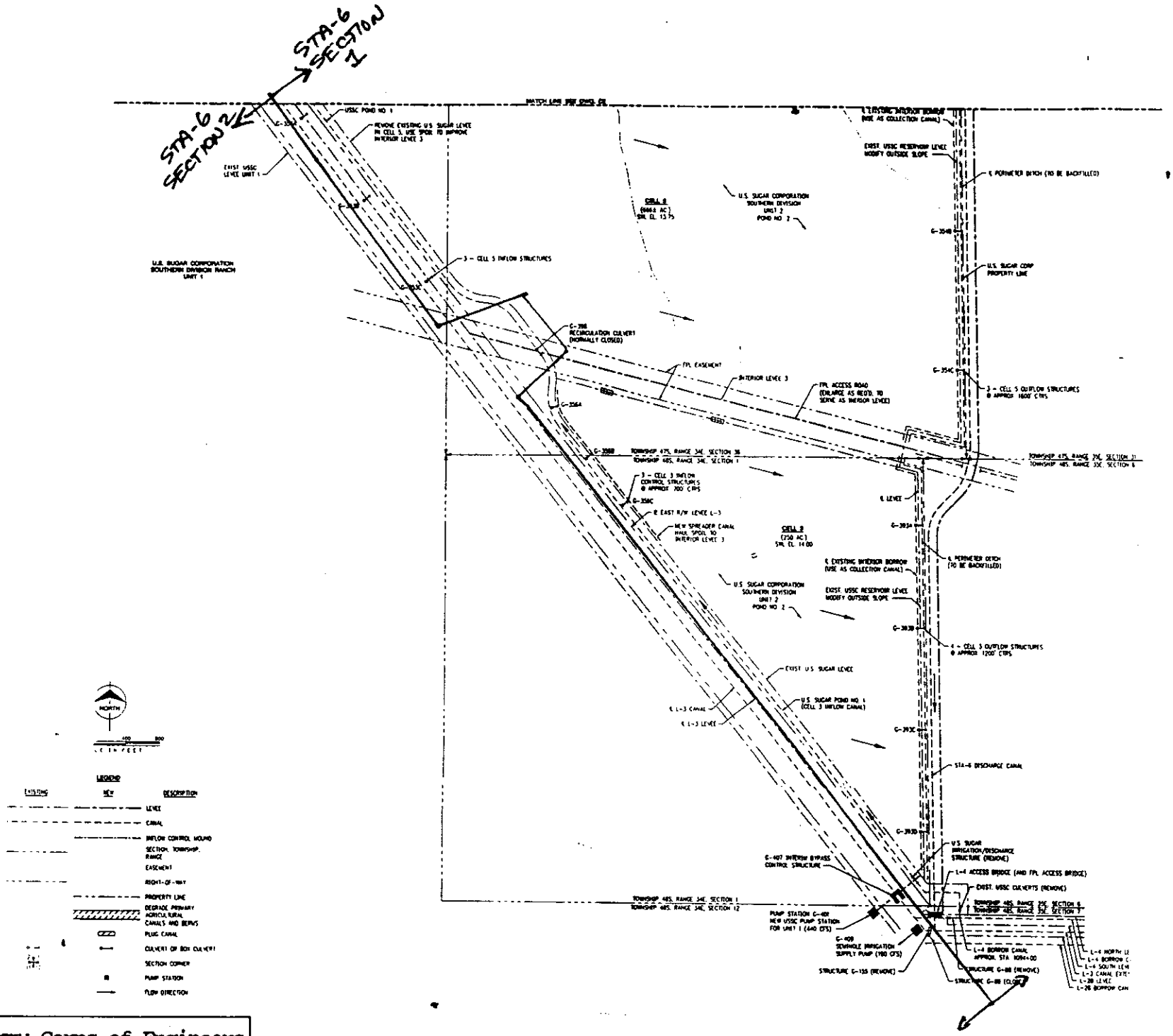
This project will: add a diversion structure and control structures in L-3 to divert flows; add a pump station to divert flows from U.S. Sugar Corporation, Southern Ranch, Unit 1, to the treatment cell 3 constructed as Section 1 of Stormwater Treatment Area 6; add perimeter levees and seepage canals to flood certain agricultural lands to create treatment cells 1, 2, and 4; add structures to divert flows from U.S. Sugar Corporation, Southern Ranch, Unit 2, into cells 1 and 2 instead of 3 and 5; add structures and collection canal to discharge the treated water into the discharge canal constructed as part of Section 1 of Stormwater Treatment Area 6. Stormwater Treatment Area 6, Section 1 and 2, will provide an effective treatment area of approximately 2,674 acres. The works are described by the drawings on pages 42 to 46.

Specific construction includes the following.

Treatment Cells. Construction of new perimeter levees, inflow canals, collection canals, interior levees, pump stations, and control structures to form treatment cells 1, 2, and 4. Extension of the U.S. Sugar Corporation Main Canal to a new Main Pump Station and backfilling of existing Main Canal within treatment cell 2. Extension of the Discharge Canal from that constructed in Stormwater Treatment Area 6 Section 1.

Diversion. Construction of inflow canal and levees to divert water from L-3 into treatment cells 4 and 5. Construction of Interior Levee 3 across Pond 1. Construction of G-407 in the L-3 Canal. Construction of Pump Station G-403 to pass flows from U.S. Sugar Corporation Unit 1 to treatment cell 3.





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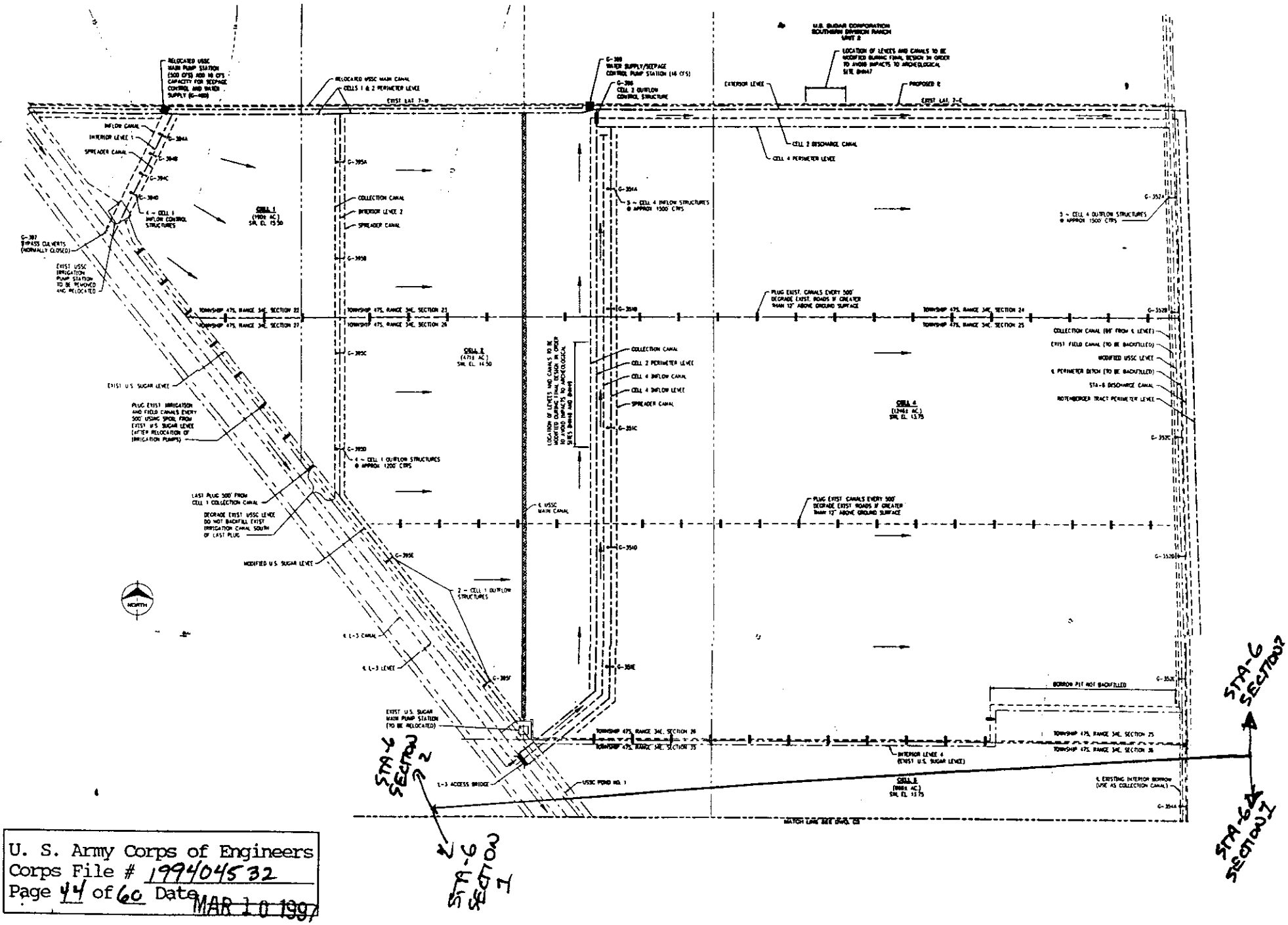
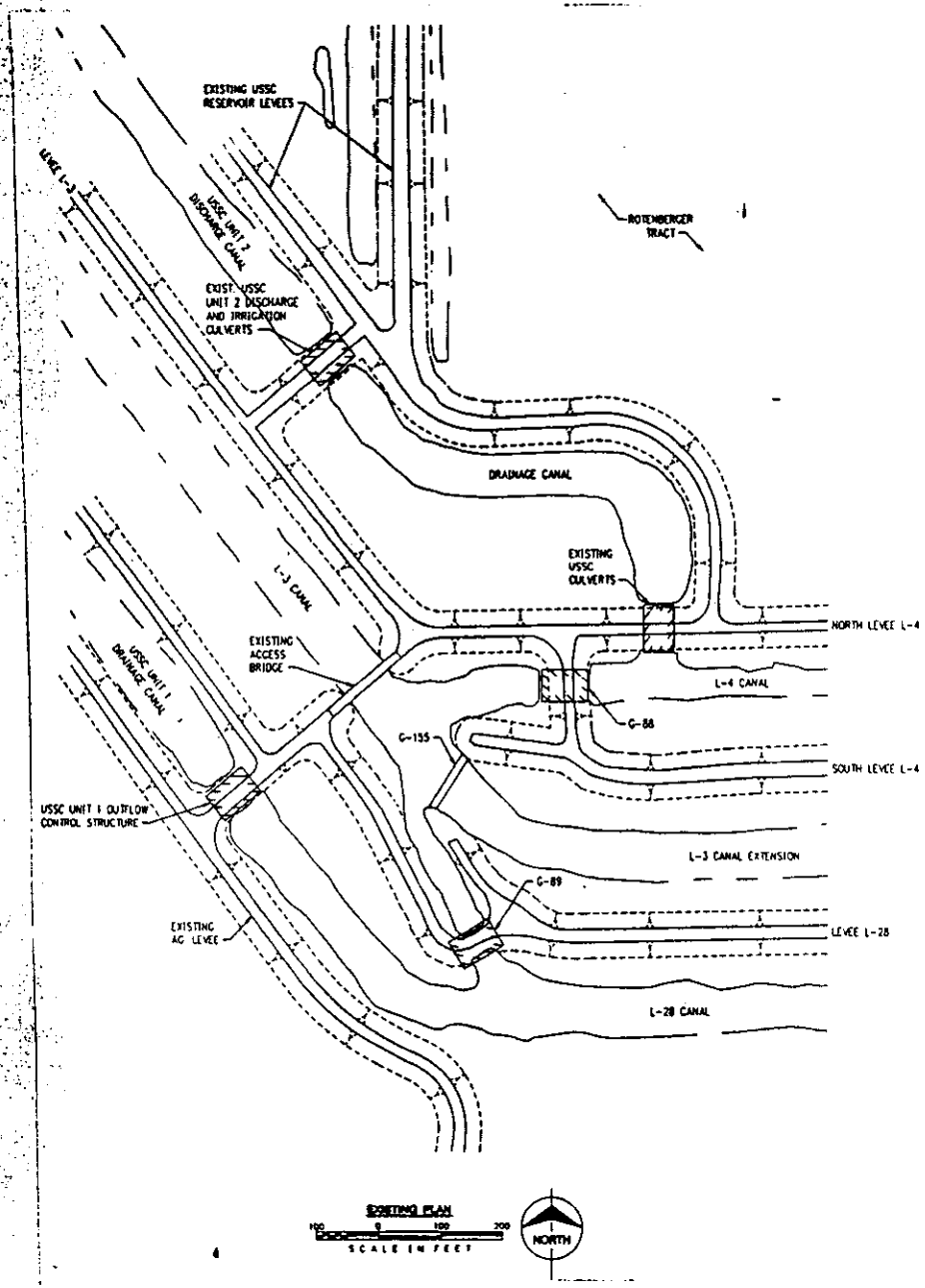
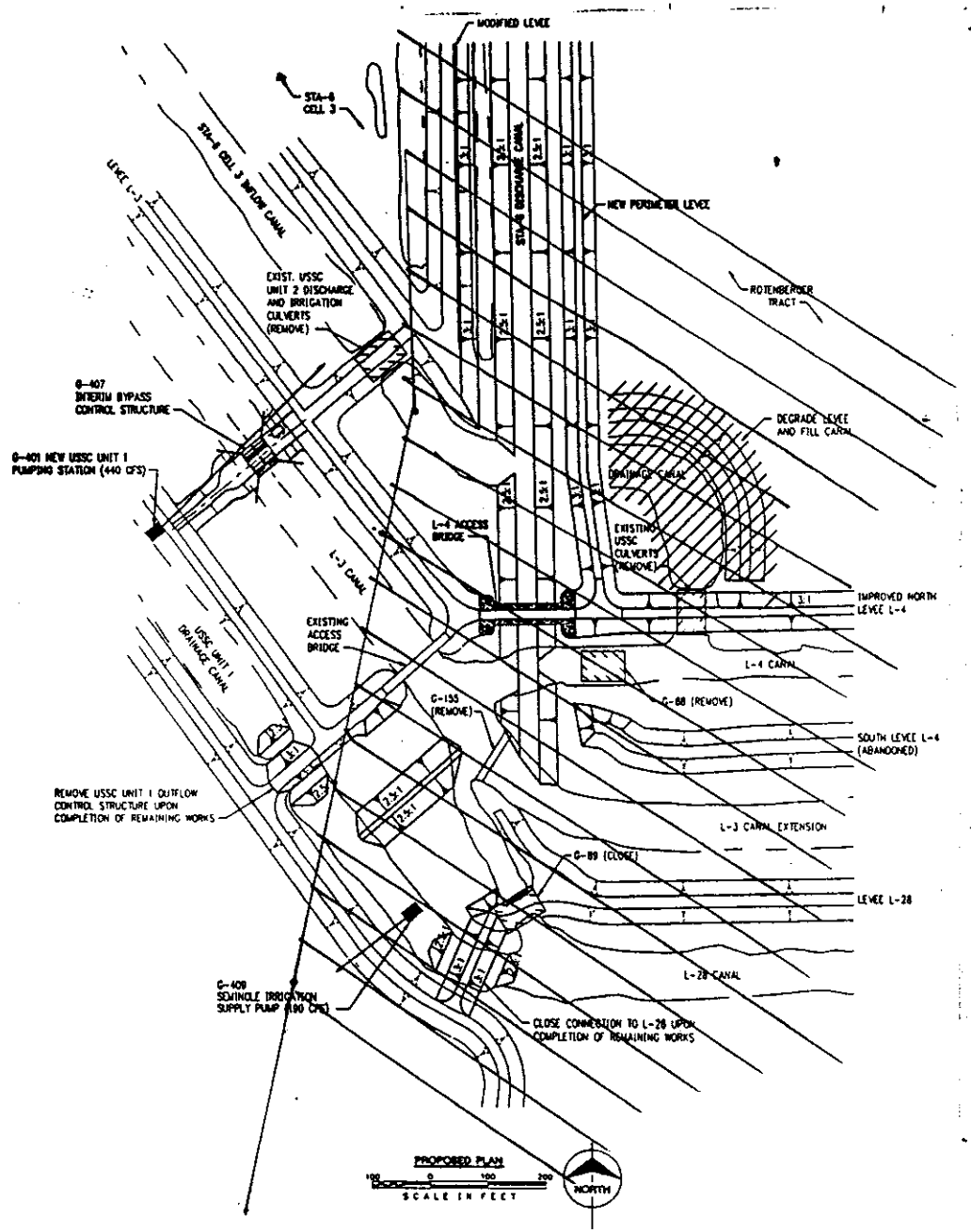
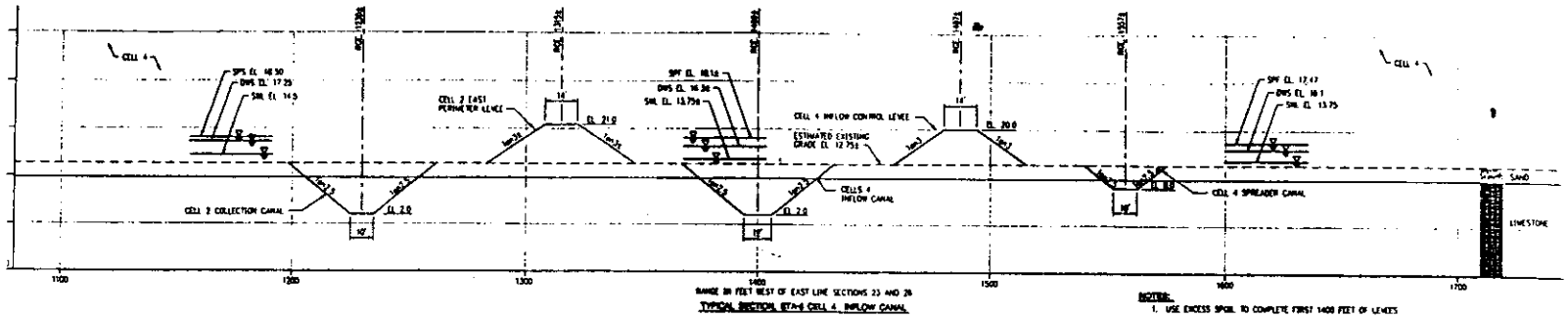


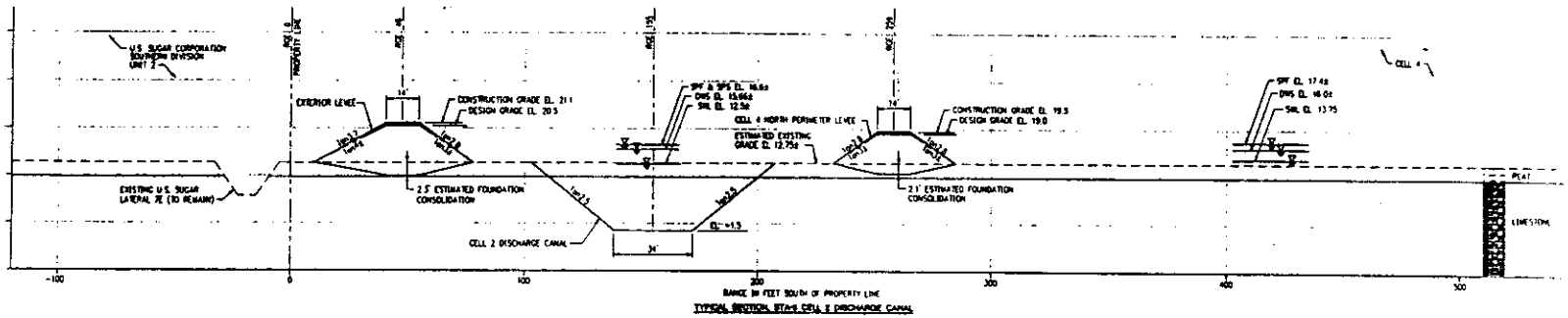




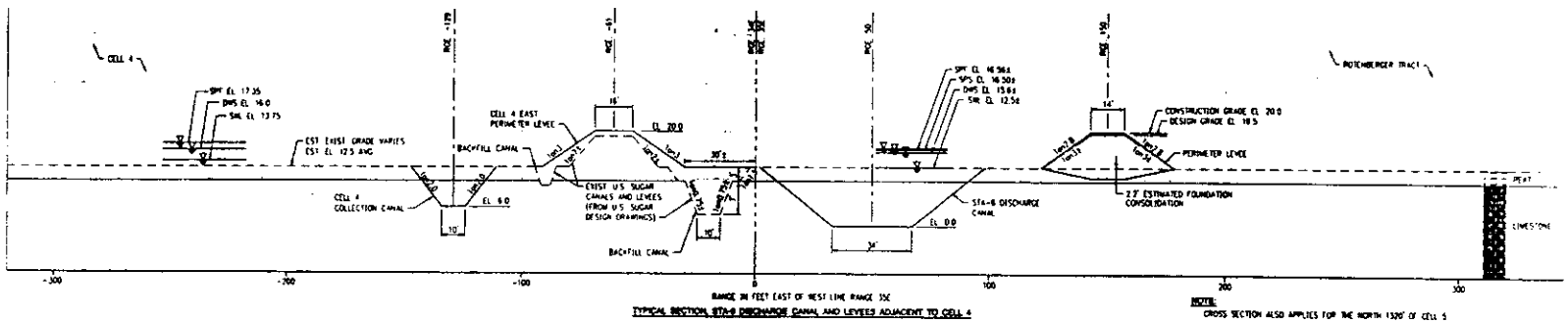


TYPICAL SECTION, STA-0 CELL 4 INFLOW CANAL

NOTES:
1. USE EXCESS SPOIL TO COMPLETE FIRST 1400 FEET OF LEVEES



TYPICAL SECTION, STA-5 CELL 2 DISCHARGE CANAL



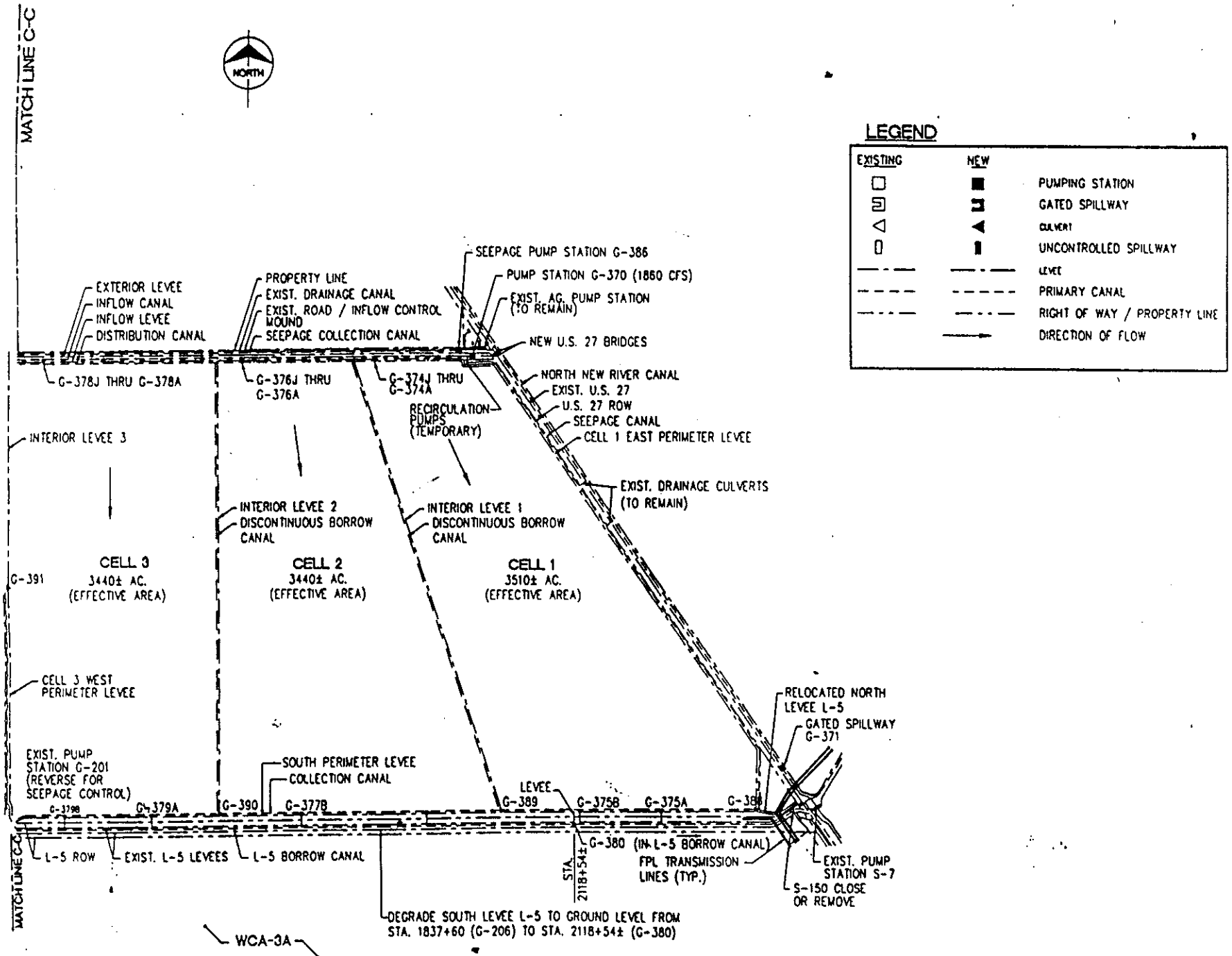
TYPICAL SECTION, STA-6 DISCHARGE CANAL AND LEVEES ADJACENT TO CELL 4

NOTE:
CROSS SECTION ALSO APPLIES FOR THE NORTH 1320' OF CELL 5

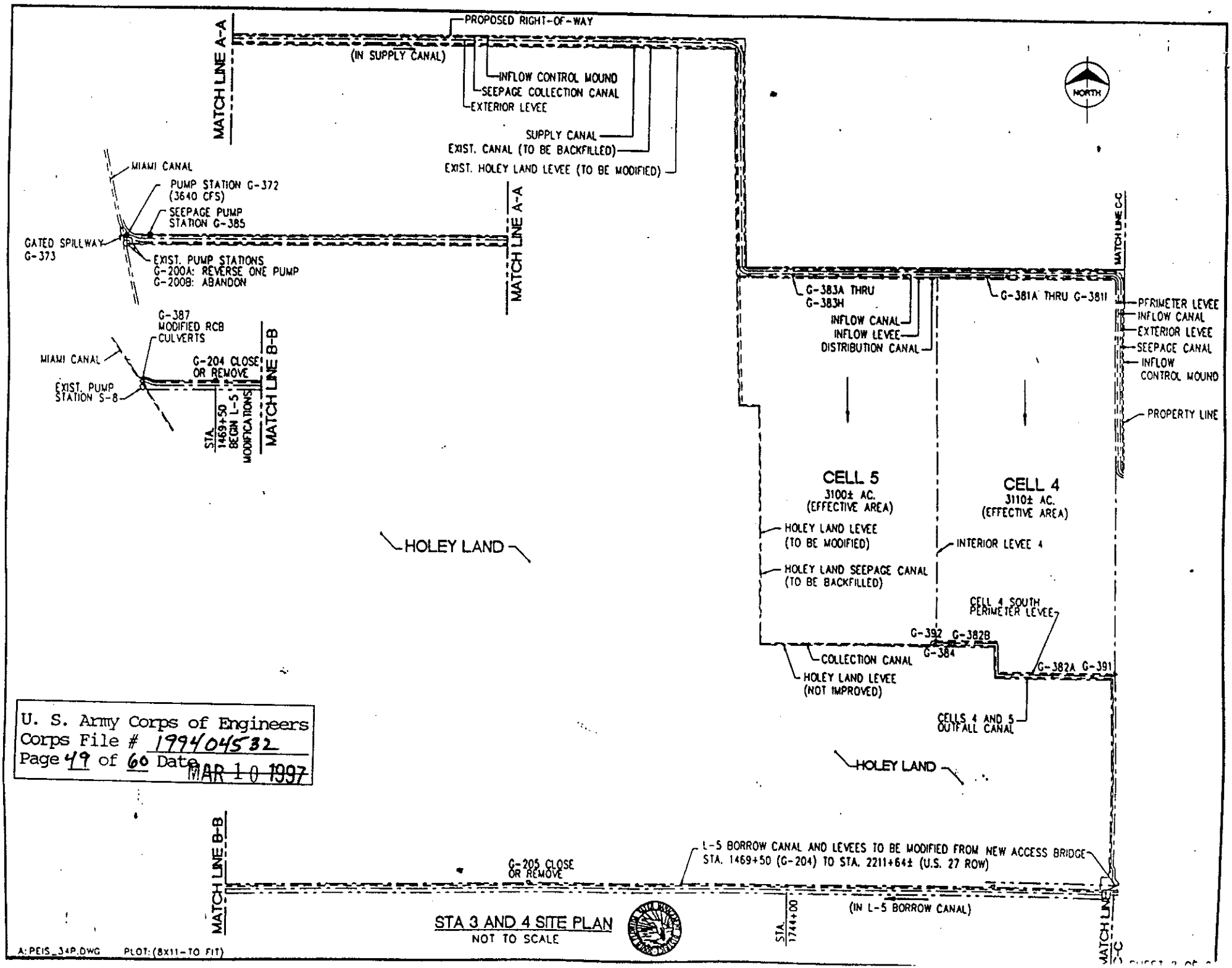
Enclosure I

Stormwater Treatment Area 3/4
including
Hydropattern Restoration
for
Water Conservation Area 3A East

This project will: add a control structure and pump station to divert flows from the Miami Canal; add inflow canals, perimeter levees, control structures, and seepage canals to flood certain agricultural lands to create five treatment cells; add collection canals and control structures to discharge treated water into the L-5 borrow canal; degrade the South Levee L-5 and install structures in the L-5 borrow canal to discharge treated water across the degraded levee into the northeast perimeter of Water Conservation Area 3A. The project will provide an effective treatment area of approximately 16,660 acres. The initial works (prior to modification of the permit for new information) are described by the drawings on pages 48 to 51.



STA 3 AND 4 SITE PLAN
NOT TO SCALE



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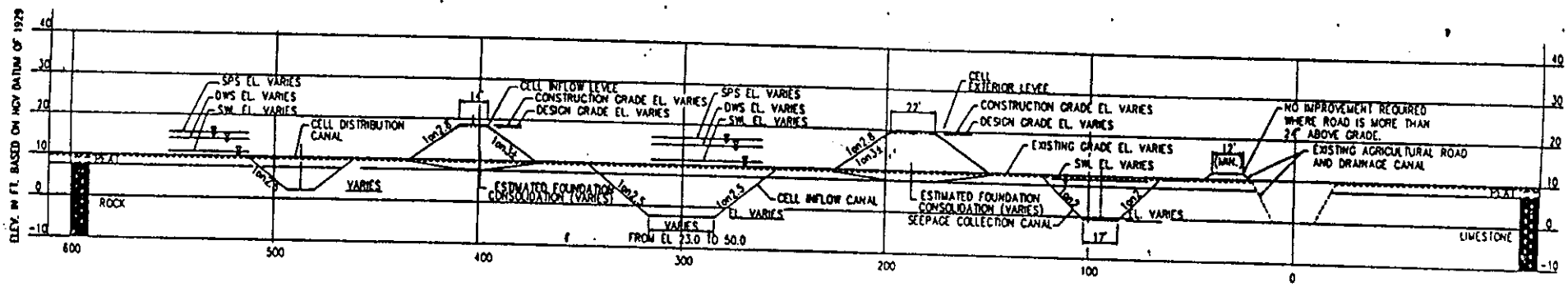
STA 3 AND 4 SITE PLAN
NOT TO SCALE

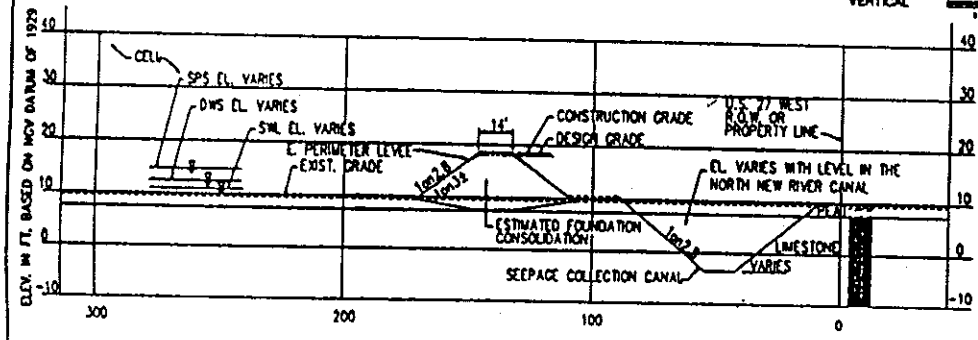
A:PEIS_34P.DWG PLOT:(8X11-TO FIT)



TYPICAL INFLOW CANAL AND LEVEE SECTION

HORIZONTAL SCALE IN FEET

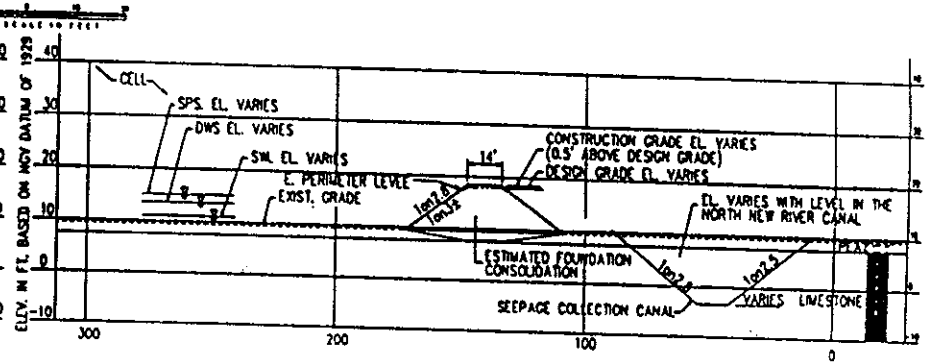
VERTICAL SCALE IN FEET



TYPICAL EAST PERIMETER LEVEE

HORIZONTAL SCALE IN FEET

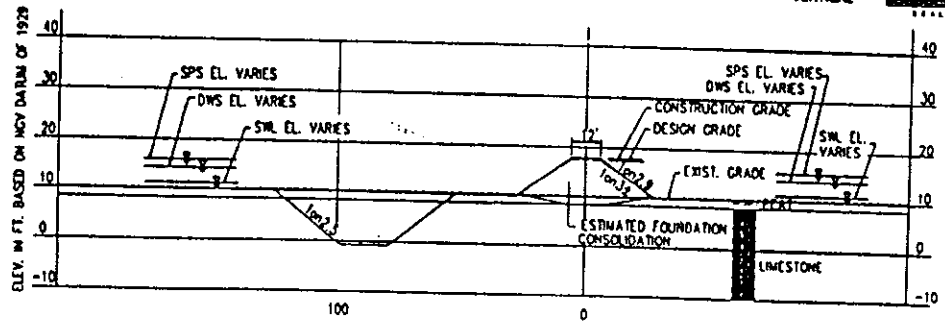
VERTICAL SCALE IN FEET



TYPICAL EAST PERIMETER LEVEE

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET



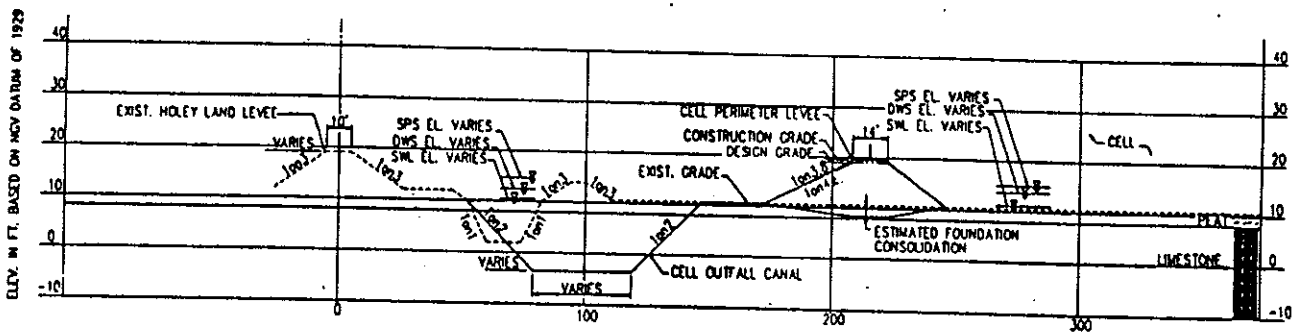
TYPICAL INTERIOR LEVEE

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET

STA 3 AND STA 4 TYPICAL CROSS SECTIONS

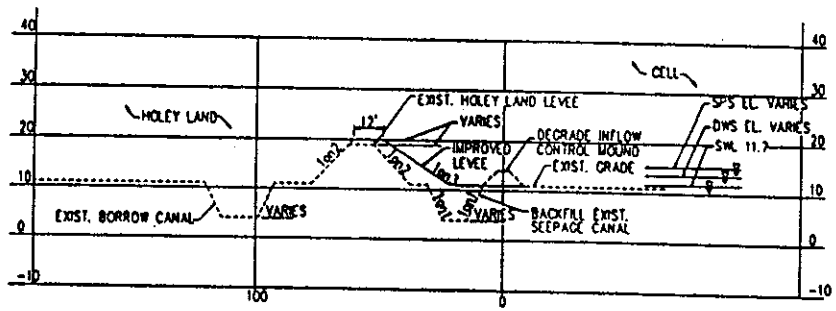
SCALE: AS SHOWN



TYPICAL PERIMETER LEVEE

HORIZONTAL

VERTICAL



TYPICAL PERIMETER LEVEE

HORIZONTAL

VERTICAL

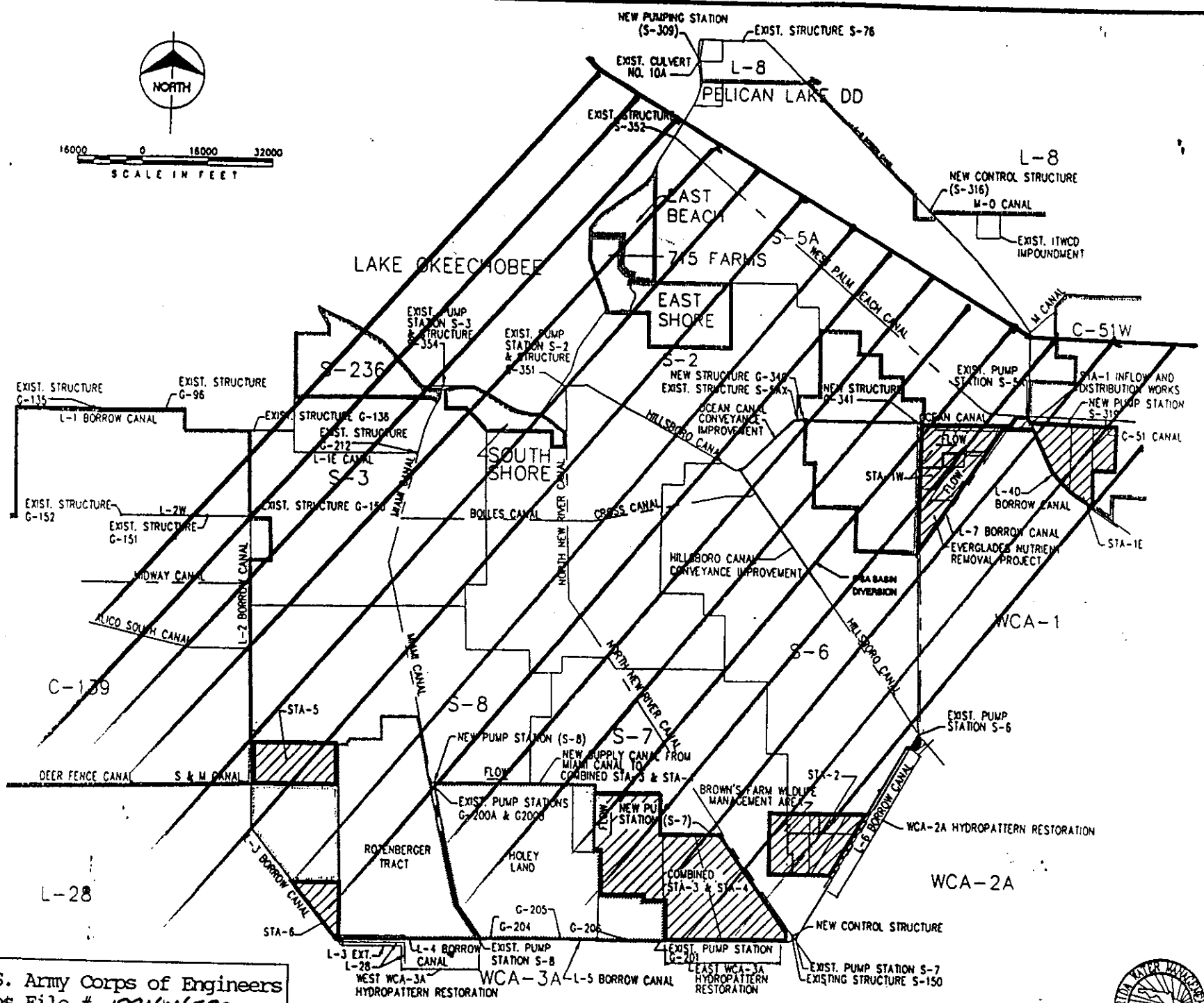
STA 3 AND STA 4 TYPICAL CROSS SECTIONS

SCALE : AS SHOWN

Enclosure J

Northern L-8 Basin Improvements

This project will add a structure in the L-8 canal and a pumping station at Lake Okeechobee to divide and redirect runoff to Lake Okeechobee. The works (until modification of the permit for new information) are described by the drawings on page 53.



VERVIEW OF EVERGLADES RESTORATION PROJECT

NOT TO SCALE

Enclosure K

Fish and Wildlife Measures

6) The applicant shall coordinate with the USFWS's South Florida Ecosystem Office during the establishment and implementation of Eastern indigo snake protection plans.

7) A qualified biologist shall conduct initial searches for gopher tortoise burrows no more than one month prior to planned clearing or earth movement for a specified phase of the ECP. The name(s) and qualifications of the proposed biologist(s) shall be submitted to the FWS for review and approval. Wherever gopher tortoise burrows are located, the underground camera investigation of burrows described under conditions number 5 below, will be conducted no more than two weeks prior to construction at the location of the burrow. When construction activities are scheduled to occur at a site where an indigo snake has been determined to be present, the biologist shall be present on site throughout that portion of the construction.

8) Eastern indigo snake protection measures:

a) An Eastern indigo snake protection/education plan shall be developed for all construction crew to follow. Educational materials should include a combination of posters or videos, pamphlets, and lectures. The protection plan should be provided to USFWS for review and approval 30 days prior to any construction or clearing activities. The protection plan should include the following information:

I) A description of the Eastern Indigo snake, its habits, and protection under Federal Law;

ii) Instructions not to injure, harm, harass or kill this species;

iii) Directions to notify the qualified biologist or designated leader if an Eastern indigo snake is sighted;

iv) Directions to cease construction activity, notify the qualified biologist, and allow the Eastern indigo snake sufficient time to move away from the site on its own before resuming construction. If an approved relocation program is to be used, the qualified biologist should be notified of any sightings of an Eastern indigo snake and construction should cease immediately. The qualified biologist should promptly relocate the Eastern indigo snake before resuming activity (only the qualified biologist is permitted to come in contact with, or relocate an Eastern indigo snake); and

v) Telephone numbers of pertinent agencies to be contacted if an Eastern indigo snake is found dead.

b) The applicant should coordinate with the FGFWFC to determine if they have already established a relocation program for gopher tortoises. If gopher tortoises are present, the qualified biologist shall map and flag the locations of all gopher tortoise burrows on the site. Prior to actual clearing, the qualified biologist shall update that initial survey no more than two weeks prior to clearing. These maps shall be made available to all construction crews. The qualified biologist shall also be responsible for identifying potential release sites prior to construction. This information should be submitted to our office for review and approval.

c) An underground camera shall be used to investigate each gopher tortoise burrow for Eastern indigo snakes. If the survey finds an Eastern indigo snake and the burrow would be destroyed by construction activity, then burrows shall then be carefully excavated with a backhoe while monitoring the snake's position and condition with the underground camera. In burrows that are unsuitable for camera use, the burrow would be carefully excavated with a combination of backhoe and hand excavation.

d) If an Eastern indigo snake is found in the burrow, it would be captured and released immediately into a pre-identified and approved preserve area near a marked inactive or abandoned gopher tortoise burrow. Eastern indigo snakes shall only be held in captivity long enough to transport them to a release site; at no time shall two snakes be kept in the same container during transportation. A map of marked available inactive or abandoned burrows should be made available to the qualified biologist. This would allow for prompt release or an Eastern indigo snake.

e) A monitoring report summarizing all activities pertaining to the Eastern indigo snake shall be provided to the South Florida Ecosystem Office. This report shall be submitted within 60 days of the conclusion of clearing and construction phases and following maintenance activities that may occur. The report shall contain the following information:

I) Any sightings of Eastern indigo snakes;

ii) Summaries of any relocated snakes (e.g., locations of where and when they were found and relocated);

iii) Thorough description of the preserve area (e.g., types of habitat, percent cover of dominant species); and

iv) Summaries of maintenance activities and schedules.

9) USFWS Conservation Recommendations:

a) The SFWMD should continue fish collection in the ENR for assessment of the level of parasitic infestation by *Eustrongylides ignotus*. Although there appears to be a direct relationship between levels and *Eustrongylides* infestation, it is not clear that the sources of nutrient input (primarily sugarcane and other crops) that would be treated in the STAs are responsible for this relationship. Additional research should attempt to correlate specific types of nutrient inputs (e.g. domestic sewage, dairy farms, sugarcane fields, and other crops) with *Eustrongylides* infestation. Continued sampling in the ENR is recommended because this was the first area to be converted to a filter marsh; if *Eustrongylides* infestation would develop after a lag time, the ENR would most likely be the first to demonstrate a change.

b) The sampling of biota in the ENR for mercury levels should be expanded. The reports we have reviewed do not indicate the lengths of the fish which were analyzed for mercury. We understand that bass have been sampled using hook and line, which would tend to capture many fish larger than are normally consumed by wading birds. We recommend that the SFWMD modify its fish sampling (possibly using electrofishing) to more effectively sample all species of fish in the 1 to 6 inch size range likely to be consumed by wood storks and other wading birds. (Some fish larger than 6 inches should also be analyzed to examine the length/mercury content relationship across each fish species' full size range.) Samples should be collected quarterly, and all fish should be sorted by species, measured, and sent for analysis. We are particularly interested in including samples of the various species of the genus *Lepomis* (redear sunfish, bluegill, etc.) that may be caught, because there make up most of the larger fish consumed by wood storks. Crayfish, which the SFWMD has not yet included in its analytical results, should also be sampled. Although crayfish are not important prey items in the wood stork's diet, they are important for other wading birds, such as white ibis. Because mercury mobilization may differ among the STAs, we recommend that the above biological sampling program be initiated for each of the proposed STAs as they are established. Because nearly all mercury in organisms is in the form of MeHg, analysis for HGT appears to be adequate.

c) The sampling protocol for mercury in water and sediments in the ENR appears to be generally adequate for the STAs. However, unlike the biological samples, analytical results for sediments and water should be reported for all species of mercury. This would allow a determination of the rate of methylation, which makes the mercury more available to organisms. We also recommend that sediment samples be analyzed for mercury at stations within each of the proposed STAs prior to flooding to establish the filter marshes. This would provide a baseline for the levels and species of mercury under the present condition (mainly agricultural) that can be compared to conditions after flooding.

Enclosure L

Seminole Tribe of Florida 401 Water Quality Certification

SEMINOLE TRIBE OF FLORIDA 401 WATER QUALITY CERTIFICATION

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 of the Federal Water Pollution Control Act (33 U.S.C. 1341) and subject to Sections 3.6.8, 12.2.4, and 13.4.4 of the Seminole Tribal Water Code.

The Tribe has reviewed the application and draft permit # 199404532 for the Everglades Construction Project ("ECP"); the June, 1996, Burns & McDonnell General Design Memorandum for Stormwater Treatment Areas ("STAs") 5 and 6 (the "GDM") of the ECP; and the October deliverables for STA-6-Section 1, and finds that the discharge of fill material associated with the design, construction and operation of STAs 5 and 6 will not result in a violation of the Seminole Tribe's Water Quality Standards if the construction and performance of these structures is as indicated in the above documents. Therefore, the Seminole Tribe of Florida certifies that the above described activity will not violate the applicable portions of Sections 301, 302, 303, 306, or 307 of the Federal Water Pollution Control Act if conducted in accordance with the above documents and the conditions hereinafter set forth.

This approval is only valid for the purpose and design submitted to the U.S. Army Engineer District, Jacksonville, or as described in the Public Notice. If you change your project, you must notify us and you may be required to submit a revised application. In addition, you should get any other applicable federal, state, tribal or local permits before moving ahead with your project. For this approval to be valid, you must follow the conditions listed below.

Conditions for Certification of STA-5 and STA-6 of the ECP:

1. G-88 and G-155 structures must be removed (or if left in place made inoperable in such a way as to have a negligible impact on water flow through the system) and the bypass control structure in the L-3 Borrow Canal must be located as identified on page II-10 of the June GDM.

2. The Tribe receiving the load calculations and water quality data obtained from a monitoring plan accepted by FDEP that demonstrates, at a minimum, that phosphorus is being removed by the Stormwater Treatment Areas (outflow compared to inflow) and, while monitoring a wide range of parameters, gives particular emphasis to total phosphorous, mercury and the pesticides specified in the Seminole Tribe's Water Quality Standards (Part 12 of the Rules to Carry Out the Tribal Water Code). The Tribe shall have the right to review and approve the District's mercury monitoring program. The above described monitoring plan(s) must be in place and implemented by the date that STA-6-Section 1 is currently scheduled for completion (October 1, 1997).

3. Under the ECP, a supplemental source of water for the Tribe will be conveyed through G-357 and pump station G-404 as indicated on page II-14 of the GDM. A water quality monitoring plan, approved by the Tribe, must be in place by the completion of STA-6-Section 1 and the plan implemented before discharges occur

from STA-6-Section 1. At a minimum, this plan must address the amount of phosphorus being conveyed through G-357 and pump station G-404 and, while monitoring a wide range of parameters, give particular emphasis to total phosphorous, mercury and the pesticides specified in the Seminole Tribe's Water Quality Standards (Part 12 of the Rules to Carry Out the Tribal Water Code).

4. All proposed bypasses of STA-5 and STA-6 which are required by maintenance within an STA must be scheduled with the Tribe and not commenced prior to approval. Under any other bypass circumstance the Tribe shall be provided prior Notice. Additionally, the G-89 structure, which allows water into the L-28 Borrow Canal, will not be operated under any bypass condition without Tribal approval. The above described approvals shall not be unreasonably withheld.

5. The design of STA-6, Section 2, should allow for the interim rehydration of the NW corner of WCA 3-A (other than through a flow of water across a degraded L-4 South Levee) until the final operational plan addressing hydropattern restoration, as referenced in draft Corps permit #199404532, is complete.

6. The Tribe receiving, not later than February 1, 2001, the plan required by draft Corps permit #199404532 which involves the implementation of additional treatment facilities or techniques to ensure that water discharged from STA-5, STA-6-Section 1 and STA-6-Section 2 does not exceed a long-term annual flow-weighted mean total phosphorus concentration of 10 ppb (unless FDEP adopts by rule another numeric criterion by January 1, 2003).

Violations of any condition herein set forth shall result in revocation of this Certification. This Certification shall become null and void unless the above conditions are made conditions of Corps 404 Permit #199404532. This Certification shall expire upon expiration of this Permit and is based upon information currently available on the design, construction and operation of STAs 5 and 6. The Tribe reserves the right to amend or revoke this Certification should additional information or future modification of these structures so warrant.

If you find this Certification to be unacceptable, or if subsequent modifications are made to an original Certification, you have the right to the Grievance and Appeals Procedures set forth in Section 3.6.8 of the Tribal Water Code. Unless the rights provided under these procedures are exercised within the timeframes so specified, this Certification shall be final and binding.

This the 21 day of January, 19 97
SEMINOLE WATER RESOURCE MANAGEMENT DEPARTMENT

Craig R. Tepper

Craig Tepper, Director

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